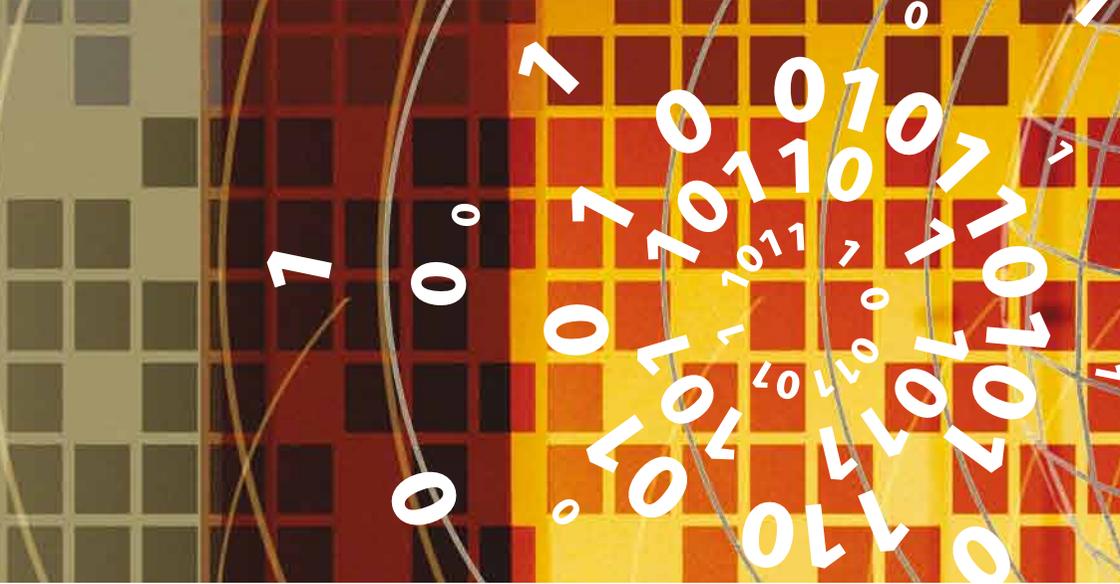# School of Electronic and Communications Engineering

Prof. Gerald Farrell, Head of School

We look forward to our new students joining us at the School of Electronic & Communications Engineering each year because they are the engineers of the future. Electronic engineers have revolutionised the way we live. Every day innovative changes to products such as mobile phones, IPods, games consoles are generated by the creativity and imagination of engineers.

As an engineer, you will have the potential to become the person who develops the exciting new products and technologies of the future that we can only dream of today.

Even with the current difficult financial climate in Ireland, there is a still a shortage of engineers in the areas of Electronics, Computer and Communications Engineering. This means that a qualification in these areas offers you not only a valuable long term career opportunity but also the prospect of employment in the short term when you graduate.

Electronic and computer engineering offers a variety of challenging and fulfilling career opportunities. I urge you to consider studying with us at the School of Electronic and Communications Engineering and help to shape the future of Electronics.

This booklet will give you a useful overview of the School's programmes and the career opportunities available to you.

I look forward to meeting you in September.

Gerald Farrell.

ADVANTAGES OF STUDYING WITH US

Applied Nature of Programmes
Excellent student-staff ratios offer students smaller class sizes with more one-to-one contact.

Ladder System
We are particularly proud of our 'Ladder System' as it allows students to obtain an Honours Degree without having Honours Maths. It offers opportunities to progress to higher qualifications. Students can transfer from our Higher Certificate onto our BEng Tech programmes and then onto our Honours Degree programmes. This system permits students to enter at higher certificate level or BEng Tech level and still offer the opportunity to graduate with an Honours Degree.

School Staff have strong Industry backgrounds
Most of our staff have worked within relevant industry sectors.

Industry Placement
Our DT081 Honours Degree programme offers students two placement options to work in paid employment.
a) Six month block placement in their third year of study or
b) participate in the ICT Internship working two days a week for the final two years of their degree programme.

Graduates have high value to Employers
Due to the high standard of our engineering programmes, our engineering graduates are well regarded by Irish and international employers. This is a direct result of our pragmatic and practical approach to higher-level education.

Location, Location, Location
Our School is situated in the heart of the city at the Dublin Institute of Technology, Kevin Street which is a young, lively and exciting campus. We offer excellent services and amenities for students, and a vibrant atmosphere in a central location, all of which guarantee that the students' time here is an enjoyable and fulfilling experience.

Facilities
We provide a multitude of activities for you to enjoy with over 40 clubs to choose from. On our Kevin Street campus students can avail of our 'state of the art' gymnasium which boasts an extensive variety of exercise and fitness equipment, an 18 metre four lane pool and a multi-purpose sports hall that caters for a wide variety of sports.

www.electronics.dit.ie

OUR PROGRAMMES

DT081: HONOURS DEGREE IN COMPUTER AND COMMUNICATIONS ENGINEERING

This programme is accredited by Engineers Ireland as satisfying the educational standards required for registration as a Chartered engineer.

This programme prepares students for a career in the computer or communications industry in areas such as mobile communications and wireless systems.

The programme combines elements of electronic, software, hardware and communication engineering to best fit the rapid convergence occurring in the ICT sector. It includes a significant amount of practical and laboratory work together with lectures and tutorials. A strong emphasis is placed on developing the applied design/development skills and in-depth knowledge required by hi-tech companies in the sector.

A two-day a week with industry/three day week college internship is available in the final two years of this programme or alternatively a six-month block work placement within industry is also available in year three. Both options are paid employment. A final year project must be completed in year four. One of our students recently completed their work placement in Cisco Systems, San Jose, California.

Contact: info@electronics.dit.ie

DT008: ORDINARY DEGREE IN ELECTRONICS & COMMUNICATIONS

This is a three year programme which prepares students for challenging careers in electronic and communications engineering areas such as design support, development and production, with a particular focus on communications engineering in the latter years.

Contact: info@electronics.dit.ie

DT089: HIGHER CERTIFICATE IN NETWORK TECHNOLOGIES

This is a two year programme which provides students with a broadly based education in computer networks and related technologies. It incorporates modules leading to the industry standard Cicso CCNA Network Administrator qualification and is appropriate for students seeking a career in designing, building and maintaining computer networks.

Contact: info@electronics.dit.ie

TOPICS YOU WILL STUDY WITH US IN YOUR FIRST YEAR

The academic year is divided into two semesters. Six modules must be completed in each semester.

DT081 – Honours Degree in Computer and Communications Engineering (NQAI LEVEL 8)
Electronic Systems, Electrical Systems, Communications and IT Skills, Computer Systems, Engineering Practice and Design, Mathematics, Physics.

DT008 – BEngTech in Electronics and Communications (NQAI LEVEL 7)
Digital Age Technology, Electrical Circuits & Devices, Electronic Systems & Practice, Communications Skills, Computer Systems, Software Systems, Mathematics, Engineering Science, Communications.

DT089 - Higher Certificate in Network Technologies (NQAI Level 6)
Introduction of networking. Computer hardware and software. Development of written and oral communication skills. Web Design. Business Studies. Computer Operating Systems. Project.

See more on the national framework of Qualifications (NQAI)
http://www.nfq.ie/nfq/en/

All of the technical subjects in these programmes include a range of assessed laboratory activities, designed to enhance the knowledge and skills of the students.

EXAMS: Exams take place in January and in May for the majority of modules. Some modules are examined on a continuous assessment basis.

Contact Time:
Lectures – on average 2 hours per week per module
Lab Sessions – on average 2 hours per week per module

Self Study:
2½ hours of self-study is recommended per module – this includes assignment preparation time etc

For more information on our programmes, please see our website or email info@electronics.dit.ie

www.electronics.dit.ie

WHAT OUR STUDENTS SAY

"My industrial placement with Cisco Systems in San Jose, California opened doors I had not realised existed before; to have the opportunity to foster a work relationship with such a market leading company before leaving college is fantastic"
Third Year Student – Honours Degree in Computer and Communications Engineering

"I didn't do honours maths in the Leaving Cert and I am now in my final year of the Honours Degree programme thanks to the 'Ladder System"
Graduate - Ordinary Degree in Electronics & Communications
Final Year Student – Honours Degree in Computer and Communications Engineering

"Its great studying in the heart of the city with everything close by, Dublin is the DIT campus – its great!"
Second Year Student – Higher Certificate in Electronic & Computer Systems

"My class is small so I have more one-to-one contact with my lecturers"
First Year Student – Honours Degree in Computer and Communications Engineering

WHAT OUR GRADUATES SAY

"Leaving college with six months work experience was invaluable"
Graduate – Honours Degree in Computer and Communications Engineering

"The programme equipped me with essential knowledge and skills required for success in industry"
Graduate – Ordinary Degree in Electronics & Communications

"I am now recruiting students from DIT"
Graduate – Higher Certificate in Electronic & Computer Systems

WHAT INDUSTRY SAYS ABOUT OUR GRADUATES

" Data Edge have been employing Kevin St. Graduates for the last 10 years with fantastic results,... definitely the most consistent technical recruits available"
Paul Phelan,
Technical Director,
DataEdge Ltd

" DIT graduates have excellent technical skills. They bring great teamwork skills with them to enhance any organisation."
Keelin Murphy
College Relations Engineer
Hewlett-Packard Ltd

" Time and time again, we are impressed by the quality, can-do attitude and technical capability of DIT graduates employed here at BT Ireland...well done and keep up the high standard"
John Gorman,
Head of Network Service Delivery,
BT Ireland

www.electronics.dit.ie

CAREER OPPORTUNITIES

DT081: HONOURS DEGREE IN COMPUTER AND COMMUNICATIONS ENGINEERING offers its graduates the chance to be well placed in industry to pursue a highly satisfying well-paid career as professional engineers. Graduates take up employment in areas such as computer engineering, software engineering, network engineering and mobile communications engineering.

DT008: ORDINARY DEGREE IN ELECTRONICS & COMMUNICATIONS offers its graduates the opportunity to work as engineers for example as part of a design team or developing novel solutions for customers.

DT089: HIGHER CERTIFICATE IN NETWORK TECHNOLOGIES Graduates will be equipped with skills and knowledge necessary for a career in IT and computer networking. The skills will encompass design, planning, installation, configuration, administration and maintenance of local and Internet connected networks. Virtually every organisation has a computer network and requires the services of a network engineer. The combined DIT and CCNA qualification means that there will be a high demand for graduates of this programme.

PROGRESSION OPPORTUNITIES FOR STUDENTS The DIT 'Ladder System' allows students who reach an appropriate level in their final examinations to progress to ordinary degree, honours degree, and master degree level programmes.

CAREERS SERVICES The DIT Career Service helps DIT students and graduates to build career development skills and to research employment and further study opportunities. The careers team is here to support you throughout the career planning process from first year onwards and our excellent employer contacts make us an essential first point of call when you begin job hunting. If you have a question relating to any career issue from course choice to job search, why not get in touch with us.

T: 01 402 3117/2961   E: careers@dit.ie

SALARIES

Experience	From	To
1 Year	€22,000	€29,219
3-5 Years	€39,808	€50,500

Source: Recent Engineers Salary Survey summary - EI

ERICSSON   intel.   DATA EDGE   SYSTIMAX SOLUTIONS   BT   hp invent   www.electronics.dit.ie

DIT LEISURE FACILITIES

At the moment there are over forty vibrant sports clubs in the Institute that facilitate all levels of abilities from leisure to competition. We offer a wide diversity of activity among the large number of official Sports Clubs. Whether your chosen activity is outdoor or indoor, team based or individual, competitive or fun, there is an activity for you.

Our Leisure Facilities at DIT Kevin Street include: An 18m 4 lane swimming pool, 'state of the art' gym and aerobics/dance studio.

SOME OUTDOOR SPORTS AT DIT
Athletics Club
Gaelic Football Club (men)
Gaelic Football Club (ladies) Golf Club
Hockey Club
Hurling Club
Rugby Club Soccer Club

SOME INDOOR SPORTS AT DIT
Aerobics Club
Badminton Club
Judo Club Squash Club
Yoga Club
Ultimate Frisbee Club
Olympic Handball Club Volleyball Club

SOME WATER SPORTS AT DIT
Aqua aerobics Club
Canoe Club
Sailing Club Swim & Waterpolo Club

MARTIAL ARTS AT DIT
Taekwon Do Club
Akido Club
Wada Ryu Club Kempo Karate Club
Shotokan Karate Club

CLUBS & SOCIETIES

- » Engineering Society
- » Rock (Music) Society
- » Dance Society
- » Circus And Juggling Society
- » DJ Society
- » Drama Society
- » Film Society
- » Guitar Society
- » Game Society
- » NETSOC (Computer Society)
- » Paintball Society

IF YOU NEED MORE INFORMATION

Useful links:

Academic Calender
www.dit.ie/DIT/academic/calendar/index.html

College life in DIT
www.dit.ie/DIT/prospective/welcome/college-life.html

Accommodation
www.dit.ie/DIT/students/support/accommodation.html

Sport at DIT
www.dit.ie/DIT/sport/

Disability Services
www.dit.ie/DIT/disability/index.html

Chaplaincy
www.dit.ie/DIT/chaplaincy/index.html

Support Services
www.dit.ie/DIT/students/support/index.html

Student Counselling
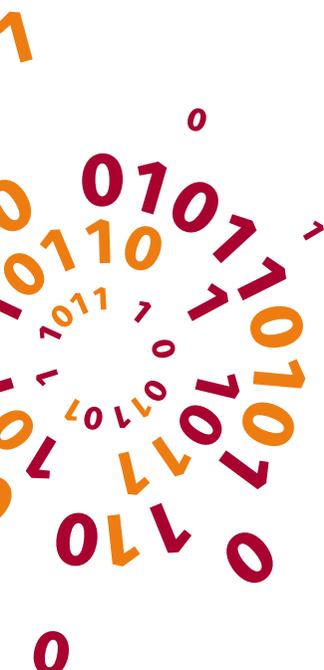www.dit.ie/DIT/counselling/index.html

DIT Student Societies
www.dit.ie/DIT/societies/

Student Union
www.ditsu.ie/

www.electronics.dit.ie

PLANNING ON JOINING US IN THE FUTURE!

Do as much research as you can on the programme you are interested in and ask lots of questions. It is so important to be happy with your chosen programme of study.

Recommended/Useful Subjects to study at secondary level:
Maths, Physics or Chemistry are all useful subjects.

Career Guidance Counsellors
It is important to talk with your schools career guidance counsellor on a one to one basis so you can discuss and plan what you wish to study, so when you start college you are confident you have joined the right programme.

Attend our Open Day:
Meet with our lecturers and students to talk about your choices. Check our website www.electronics.dit.ie for our next Open Day @ DIT
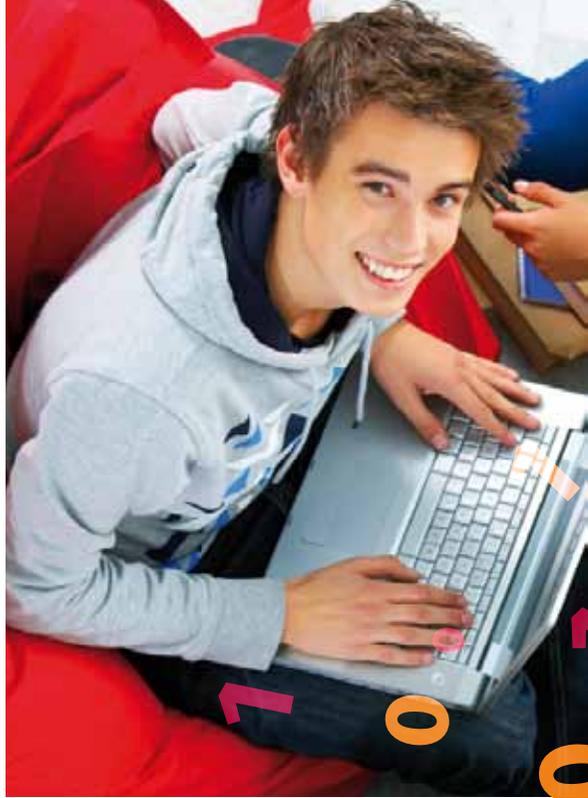
ENGZONE
the engineering zone

ENGZONE is our Faculty of Engineering website for secondary schools //engzone.dit.ie/ If you have any questions about electronic, computer and communications engineering please email info@electronics.dit.ie

Request a school visit:
If you wish to have some of our lecturers visit your school to talk about our programmes please email info@electronics.dit.ie

Experience College Life:
Come and experience college life during the next academic year and meet some of our current students. Attend some lectures and labs, meet some staff and see what college life is really like. If you are interested in joining us next year for a few days please email info@electronics.dit.ie. Places are limited so contact us early.

www.electronics.dit.ie

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Ireland

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Fax: + 353 1 402 4690
info@electronics.dit.ie

ELECTRONICS IN YOUR EVERYDAY LIVES

MOBILE PHONE
**A mobile phone combines electronic circuits and
systems with software to provide lots of functions
such as games, a camera or an address book. A
primary function is communication. In some of the
subjects you will study, you will get an opportunity to
study about communications engineering and how a
mobile phone works.**

MP3 PLAYER
**An MP3 player is not only a good example of
electronics in action the MP3 format compresses a
music track so that the memory space occupied is very
small. The technology that underpins the MP3 format is
called 'signal processing', a subject that you will get an
opportunity to study in our school.**

GAME CONSOLE
**A games console is one of the most popular examples
of electronics and computers in action. Each game
console has at its heart a powerful dedicated electronic
processor that not only runs the game but also drives
the display and monitors the user controls. You will get
an opportunity to study many of the subjects areas that
underpin this technology, from the basic electronics to
the programming of dedicated processors and detection
of user input.**

www.electronics.dit.ie