

School of Electronic and Communications Engineering

A Career in Engineering



What is Engineering?

Using your knowledge to make things
that no-one has ever made before.



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Today's iPhone



What is an Engineer?

Engineers are not Scientists..
They make things happen..

Scientists
discovered the
principles of
forces and
matter



and engineers
use this
knowledge to
put space
craft onto
the moon..

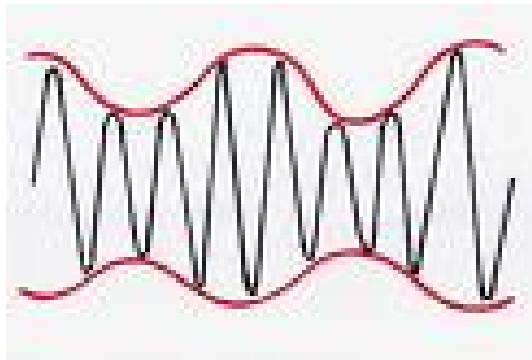


What is an Engineer?

Another example:

Scientists discover how radio waves travel

Engineers use this to improve the design
of a mobile phone..





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Engineering is everywhere

Engineering has been around for a
very long time..



Newgrange is one of the oldest
examples..



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Engineering is everywhere

Transport

Computing

Communications

Manufacturing

Medicine



■ LUAS RAIL
SYSTEM



■ DUNDRUM
BRIDGE



■ iPHONES



Could you be an Engineer?

- Do you like doing new things?
- Can you figure out things like getting a new piece of software to work?
- Do you read up on how they create special effects in films?
- Do ideas or gadgets interest you?





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Could you be an Engineer?

Do you like working with
people?

Can you explain ideas to
your classmates?

Do you like meeting
people?

Do you like working or
playing in teams?

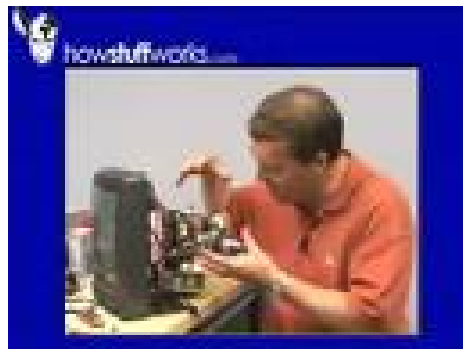




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Traits of an Engineer

- Interested in solving problems
- Interested in Technology
- Wants to find better ways of doing things, AND FINDS THEM!





Types of Engineering

- **Electronics** - mainly communications and computer systems
- **Electrical** - generates and distributes power
- **Civil** - building roads and bridges
- **Mechanical** - anything with moving parts, cars, engines, escalators, lifts
- **Manufacturing** - runs the factories that make the things that other engineers design



What does an Electronic and Communications Engineer do?

Designs all electronic
devices that you use
everyday

Example: MP3 players,
PCs, laptops, radios, iPods,
television, security
alarms, traffic lights....

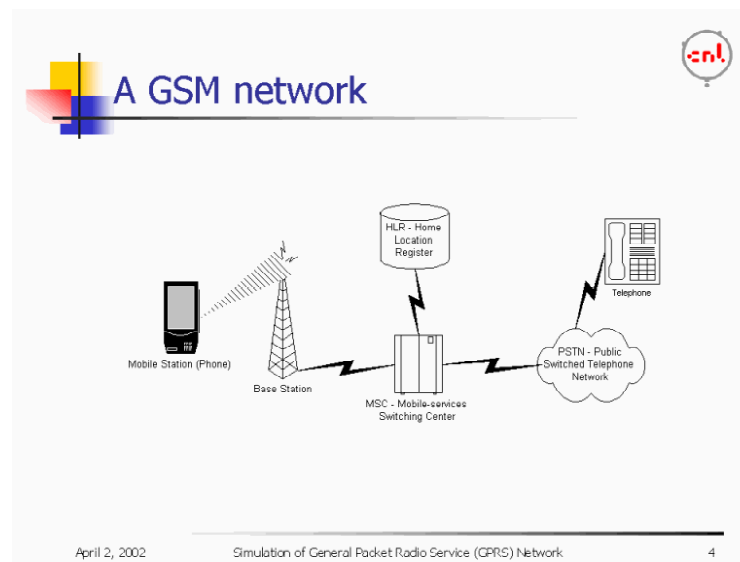




What does an Electronic and Communications Engineer do?

Figures out ways to connect all of
these together:

-telephone network, internet, GSM network,
3G, radio/television broadcasting...





What does an Electronic and Communications Engineer do?

■ Manages projects to transform designs into real working systems.



- Vodafone engineers plan where to locate base stations and exchanges and to maintain, build and implement new service centres...



- Intel engineers design the circuits that go into every PC, and get them built.



EXERCISE

On your way home, look around and
count how many times you see the work
of an
electronic and communications
engineer....





INDUSTRY

- One of the largest employers in Ireland
- Sector is one of the largest Irish exports
- Industry demand for engineers and technicians each year
- Good qualifications are needed to succeed in this industry
- Your prospects are good, salaries for graduates start at €25K to €29K
- Electronic Engineering is the highest paid engineering profession





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Careers in Engineering

Professional Engineer
4 Years



Design
Development
Management



Honours Degree in Computer and
Communication Engineering

DT081

Honours Degree in Electrical/Electronic Eng

DT021



Careers in Engineering

Technician Engineer

3 years



Development
Manufacture
Test

(Bachelor of Engineering Technology Degree)
Ordinary Degree in Electronics & Communications

DT008

Technician

2 years



Manufacture
Installation
Maintenance

(Bachelor of Engineering Technology Degree)
Ordinary Degree in Electronic and Computer Systems

DT080

Higher Certificate in Electronic and Computer Systems

DT089



School of Electronic and
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Our Programmes

DT081 - Honours Degree Programme in Computer and
Communications Engineering

Qualification: Honours Degree **Level 8**

Duration: 4 Years Typical Points: 320 - 400

Placement: Option 1: 6 months working in industry
Option 2: -2 days a week working in industry
eg Intel, HP, ESB
- 3 days in college

Dylan Cross worked for Cisco Systems, in San Jose, California
'It was an amazing experience' Dylan Cross

Entry requirements: A pass in six subjects, Grade C3 in higher
level maths and one other higher level subject

Professional engineering qualification





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DT008

**DT008 - Ordinary Degree in Electronics and
Communications Engineering**

**Qualification: (Bachelor of Engineering Technology
Degree) Level 7**

Duration: 3 Years

Typical Points: 250 - 300

**Entry Requirements: A pass in five subjects,
Grade B3 in ordinary level maths**

**Progression: Transfer to an Honours Degree programme is
possible**





DT089 - Higher Certificate in Electronics and Communications Engineering

Qualification: Higher Certificate in Electronics and Communications Engineering **Level 6**

Duration: 2 Years

Typical Points: 200 - 250

Entry Requirements: Pass in five subjects and a grade C3 or higher in ordinary level maths

Progression: Transfer to one year ordinary degree programme (DT080) is possible





**DT080 - Ordinary Degree in Electronics and
Computer Systems**

Qualification: (Bachelor of Engineering
Technology Degree) **Level 7**

Duration: 1 Year

Entry: Apply through Advanced Entry in DIT

Entry Requirements: Higher Certificate in
Electronic and Computer Systems or
equivalent

Progression: Transfer to an Honours Degree
programme is possible

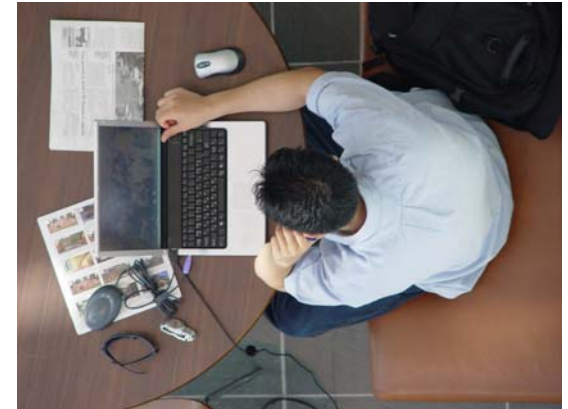




School of Electronic and
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Why DIT?

- Modules/Subjects are 50% practical - 50% theoretical
- Small Classes
- Approachable Staff
- Our graduates find valuable careers in industry
- Ladder System
- One of first engineering Schools in Ireland to offer programmes in electronics
- Close to City Centre



www.electronics.dit.ie



Sports and Other Clubs

- Clubs and societies are an important part of college life
- Sports:
 - 27 main clubs: athletics to karate to volleyball
 - Variety of other classes, training and events
 - Facilities include gym and swimming pool in Kevin Street
 - Rugby, DJs, Drama Society, Music Society, Juggling, Breakdancing
- Other clubs and societies
 - Wide variety across the D.I.T.
 - Caters for broad range of interests





Why a Career in Engineering?

- Well Paid - Electronic Engineering is one of the higher paid
- Challenging and Rewarding
- Job Variety and satisfaction - opens many doors to take you as far as you are able to go. Engineering and Business, Engineering and Finance, Engineering and Pharmaceutical, Entrepreneurial.
- Opportunity to innovate
- Internationally recognised qualifications
- Opportunities to lead/manage





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Thank you for watching!

- For more on our programmes please log onto our website <http://www.electronics.dit.ie/>
- And also www.engzone.ie/

If you have any questions on our programmes please email the Agony Ant on the ENGZONE site and enter the engzone competitions

Agony Ant



ENGZONE

www.dit.ie/engzone

www.electronics.dit.ie