

Your Degree in Mechanical Engineering...What Next?

“Scientists discover the world that exists; Engineers create the world that never was.” Theodore Von Karmen 1881

Mechanical engineering is one of the oldest engineering disciplines. Mechanical engineers design, build, install and maintain all kinds of mechanical machinery, tools and components. Your skills are needed in a wide range of manufacturing environments including:

- The automotive/car industry
- Aerospace industry
- Biotechnology, including pharmaceutical industry
- Computers and electronics
- Microelectromechanical systems (MEMS)
- Energy, conventional and renewable
- Automation (robots in manufacturing)
- Manufacturing.

You may be working on large or small-scale projects, and become involved in research and development, design or production. Whatever you specialise in, you'll be expected to progress projects from initial brief to completion.

What skills have I gained?

A qualification in engineering is highly regarded and valued by many employers for the relevant, transferable skills and competencies you can bring to a wide range of professional fields.

Core skills gained from your Mechanical Engineering degree include:

- Analysis and problem solving
- Logical and mathematical reasoning
- Research and analytical skills
- Teamwork
- Technical skills

Graduating from your engineering degree leaves you with a diverse range of opportunities to consider and ideally you will spend a lot of your final year carefully researching your options, either **graduate employment or further study**.

EMPLOYMENT

Graduates are well placed to apply for fulltime, entry level jobs upon graduation. **Jobs** are mainly in design, installation, maintenance and project management where you will be expected to bring strong mechanical process experience and be responsible for the mechanical design packages/systems relevant to that industry.

Employers in Ireland include:

- Bord Na Mona
- DPS
- ESB /Electric Ireland
- Jones Engineering
- Liebherr
- Mercury Engineering
- PE Global
- PM (Project Management)
- Siemens
- Turmec Teoranta
- Veolia

Check the jobs page on CIT's Careers & Employability Service website; <http://www.mycit.ie/careers>.

What are the 2015 graduates doing now

Employer	Job Title
ESI Technologies	Technical Support Engineer
Protect Performance Plastics Limited	Junior Mechanical Design Engineer
Intel	Technician
Apple	Quality Engineer
Aviva	Back Office Advisor
Stryker	Advanced Manufacturing Engineer
Phillips 66	Mechanical Engineer
MEP	Junior Mechanical Engineer
Wyett Nutrition	Manufacturing Project Engineer
P M Group	Graduate Mechanical Engineer
Musgrave	Warehouse Assistant
PM Group	Mechanical Engineer
Master Engineering	Drafting
BMD Ltd	Junior Engineer
Maitech	Sales Manager
Pharmaco Engineering	Design Project Engineer
Cronin Commercial	Labourer
Hyde Engineering + Consulting	Engineer I
Tricel	Graduate Engineer
Country Clean Recycling	Graduate Environmental Health & Safety Officer

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Bio Marine	CAD Technician
Jacob Engineering	Piping Designer

Job description

Engineering is the application of science for the benefit of humankind; mechanical engineering deals with moving parts, flow and heat. Mechanical engineers make things work and are involved in design, testing, inspection and manufacturing. They design and develop everything that qualifies as a device or machine, from an item as simple as a can opener to a modern jet aircraft. Mechanical components are found in obvious things like cars, aircraft and big machines, but other things too, like medical devices and equipment for generating energy. Virtually everything you buy or use has had a mechanical engineer involved in its design and production.

Mechanical engineers don't design quite everything, but they do design the tools and processes that make every tangible product. Robots that weld car bodies, automatic vehicles that feed materials through a factory, and the methods used to melt and shape metals and plastics are all the result of mechanical engineering design and development.

Mechanical engineers are also at the centre of the energy industry. They are creating the innovations that will allow us to access energy from renewable sources, as well as developing technologies to ensure that we use established energy sources efficiently and responsibly. Mechanical engineers are creating high-performance materials for larger, more economical, recyclable wind turbine blades and developing wave energy systems that can survive an Atlantic storm.

The mechanical engineers' versatility allows them to work in a range of roles including research, design, project management, technical sales, computer-aided engineering, process control, manufacturing engineering, aeronautics, materials engineering and product development. In these roles they serve nearly every industry, including the rapidly evolving energy sector.

Work activities

- Using a mix of science and mathematics along with engineering techniques to design, test and create
- Developing detailed designs using a range of computer packages
- Integrating mechanical designs with electrical and electronic system and using specialised computation as a tool to support their work
- Creating, coordinating and monitoring all aspects of production, fabrication and product design
- Performing engineering assignments related to design and analysis for packaging equipment and line systems
- Optimising new systems and upgrades to existing processes and facilities
- Developing reliability protocols and reports
- Working with maintenance teams to develop and implement preventative maintenance processes.

www.gradireland.com

GRADUATE PROGRAMMES

You may wish to apply for a place on a graduate programme. These are paid work programmes, sometimes at various locations and many also offer opportunities for further training/education.

Companies often advertise graduate programmes or graduate jobs on the job page of a College/University Careers Service website as well as on www.gradireland.com

Register with gradireland to get email alerts on employment opportunities as well as job search advice www.gradireland.com You can pick up a copy of the **Gradireland Careers Directory** for Ireland (north and south) at the Careers & Counselling Service, 2nd Floor, Student Centre, CIT.

POSTGRADUATE STUDY

A postgraduate qualification enables you to gain, more specialized knowledge of your primary degree field or develop knowledge in a complementary area. Postgraduate studies can give you a specific technical, vocational or professional qualification and facilitate you in developing a range of key skills including: research, analysis, evaluation and written communication.

For further information, go to the 'Further/Postgraduate Study' link on the Students page of our website; <http://www.mycit.ie/careers>.

See also www.postgradireland.com and Engineers Ireland www.engineersireland.ie

MORE INFORMATION

Engineers Ireland www.engineersireland.ie

Irish Engineering Enterprises Federation – www.ibec.ie/ieef

Institute of Industrial Engineers - <http://www.iie.ie/>

Association for Consultancy and Engineering www.acei.ie

Society of Manufacturing Engineers – www.sme.org

Pharmaceutical Ireland – www.pharmaceuticalireland.ie

IDA Ireland - <http://www.idaireland.com/>

Shannon IASC - <http://www.iasc.ie/>

For career opportunities in engineering in the UK see www.targetjobs.co.uk

TARGET Engineering publication and TARGET JOBS magazines are available from the Careers & Counselling Service or download it from the website above.