

Mechanical Engineering LEVEL 8

Your Careers Adviser
Peter Lewis

T +353 1 402 3868
E engcareers@tudublin.ie

www.tudublin.ie/careers



Skills developed in college

You've developed a range of skills through your education, work experience and personal interests and achievements.

Understanding what skills you have to offer and like to use can help you understand what you want in a career, as well as providing key information for job or further study applications.

In terms of securing a job, academic qualifications alone will not guarantee success. Evidence-based skills sections on your CV can demonstrate the broad range of qualities you have to offer employers.

[Opposite are some of the main skills you may have developed while in college:](#)

- **Communication skills, both verbal and written**
Expressing ideas effectively and conveying information appropriately and accurately. Influencing others by expressing self effectively in a group and in one to one situations. Showing a range of verbal and nonverbal signals that the information being received is understood.
- **Teamwork/working with others**
Working effectively and confidently within a group to achieve a common goal or task. Including understanding your role within the team, and listening and supporting other team members.
- **Problem-solving ability**
Identifying, prioritising and solving problems, individually or in groups; possessing the ability to ask the right questions, sort out the many facets of a problem, and contribute ideas as well as answers regarding the problem.
- **Time-management skills/ability to meet deadlines**
Managing several tasks at once; being able to set priorities and to allocate time efficiently in order to meet deadlines.
- **Planning and organising**
Establishing a course of action for self and/or others to accomplish a specific goal. Planning proper assignments of personnel and appropriate allocation of resources.
- **Leadership skills**
Motivating and taking responsibility to lead other people, in order to achieve set goals and objectives.
- **Initiative & self-management**
Identifying opportunities and being proactive in putting forward ideas and potential solutions. Self-disciplined and self-motivated, in the pursuit of studies and professional practice.
- **Ability to make quick decisions/work under pressure**
Making decisions and taking action. Maintaining performance under pressure and/or opposition.

[You may also have developed a wide range of technical/specific course related skills](#)

Types of employers/industry sectors

Some of the main types of employers/industry sectors in which Mechanical Engineering graduates work include:

- Engineering Consultancies
- Transport including road and railways
- Energy Companies / Renewable and Sustainable Energy
- Irish Defence Forces
- Manufacturing industries (Bio / MedTech / Pharma / Chemical/Food & Bev / ICT etc.)
- Aerospace and automotive industries
- Process industries, including pharmaceuticals, food and cosmetics
- Construction companies
- Government agencies
- Medical Devices / Medicine engineering
- Energy utilities
- Oil and gas industries, including petro-chemical industries
- Safety
- Education
- Research and Development

For sector information see:

- www.gradireland.com
- www.careersportal.ie
- www.prospects.ac.uk
- www.targetjobs.co.uk

Career options with your course

Some of main occupations and job profiles secured by Mechanical Engineering graduates include:

- Aeronautical engineer
- Aerospace Engineer
- Automotive Engineer
- Automotive Engineer
- BIM Designer
- Biomedical Engineer
- Biotechnology/Bioengineer
- Building services Engineer
- Computer Modelling/Simulation
- Construction Engineer
- Customer Services Customer Support Engineer
- Design Engineer
- Specialist Drilling Engineer
- Energy Management
- Engineering Draughtsperson
- Engineering Manager
- Facilities Engineer
- Factory Layout

- Fault Diagnosis and Testing
- Field Service Engineer
- Graduate Test Engineer
- HVAC Engineer / Technician
- Industrial Engineer
- Junior Contracts
- Manager Lighting
- Line Engineer
- Maintenance
- Manufacturing Engineer
- Manuf. Systems Engineer
- Manufacturing Technician
- Materials and Testing
- Mechanical BIM Detailer
- Mechanical Design Engineer
- Mechanical Engineer
- Mechanical Manager
- Mechanical Process Engineer
- Mechanical Project Engineer
- Metrology - precision measurement
- Naval Architect
- Plant Engineer
- Process Engineer
- Product Design Engineer
- Project Development
- Project Engineer
- Project Manager
- Quality Control
- Improvement Engineer
- Quality Engineer
- Renewable& Sustainable Energy
- R&D Engineer
- Sales Admin Engineer
- Strategic Power Plant Engineer
- Sustainable Energy Design
- Technical Co-ordinator
- Technical Sales Engineer
- Test Engineer
- Testing & Validation Engineer
- Transmission Programmer
- Transport and Safety

For occupational information see:

- www.gradireland.com
- www.careersportal.ie
- www.prospects.ac.uk
- www.targetjobs.co.uk

Employers who have recruited in your area

Companies who have recruited Mechanical Engineering graduates:

- Airtricity
- Amgen
- ASML
- Astellas
- Bauche and Lomb
- Becton Dickson
- Bord Gais
- Boston Scientific
- Bowen Construction
- Braun
- Cameron International (Irl)
- Chanelle Pharmaceuticals
- Civil Service
- Civilco
- Combilift
- David Langdon PDS (AECOM)
- Diageo
- Doosan

Job Hunting

It is important that you access both the advertised and hidden jobs market and use any and every means available to you to job hunt effectively.

Advertised Jobs

Most University and IT Careers Services have jobs listings on their websites:

www.tudublin.ie/jobscene

Graduate programmes and immediate vacancies

GRADUATE RECRUITMENT WEBSITES

- [Gradireland \(Ire\): www.gradireland.com](http://www.gradireland.com)
- [Glassdoor \(Ire\): www.glassdoor.ie](http://www.glassdoor.ie)
- [Gradcracker \(UK\): www.gradcracker.com](http://www.gradcracker.com)
- [Prospects \(UK\): www.prospects.ac.uk](http://www.prospects.ac.uk)
- [TargetJobs \(UK\): www.targetjobs.co.uk](http://www.targetjobs.co.uk)
- [Milkround \(UK\): www.milkround.com](http://www.milkround.com)

ONLINE SEARCH ENGINES / AGENCIES

- Recruitment Agencies - www.irishjobs.ie/agencies – complete list of agencies
- On-line recruitment search engines e.g. www.indeed.ie; www.irishjobs.ie; www.jobs.ie; www.recruitireland.com; www.monster.ie; www.careerjet.ie; www.simplyhired.ie; www.jobsireland.ie;

OTHER ENGINEERING JOB-HUNTING WEBSITES

- Engineers Ireland Job Desk/Employment Services (Jobs Desk) – www.engineersireland.ie
- LinkedIn Groups (e.g. Engineers Ireland) – www.linkedin.com
- Association of Consulting Engineers (Directory) – www.acei.ie
- Irish MedTech Association – www.irishmedtechassoc.ie
- 'the engineer' jobs site (UK) - <https://jobs.theengineer.co.uk/>
- Top Engineering Jobs (UK) - www.topengineeringjobs.com
- Internships - www.internjobs.com
- Institute of Engineering and Technology Jobs Site - <https://engineering-jobs.theiet.org/>
- ASME Jobs Board - <http://jobsearch.asme.org/>
- US Engineering Jobs Website - www.engineeringjobs.com
- IAESTE (International work experience) - <http://iaestelc.ie/lagora> (International Jobs & Internships) – www.iagora.com

PUBLIC SECTOR JOBS

- Public Service - www.publicjobs.ie, www.localgovernmentjobs.ie

EVENTS/PUBLICATION ETC.

- Careers fairs – Gradireland Fair – Autumn, STEM (Feb), Summer Fair, plus many others
- Organisation websites - trainee programmes, vacancies, summer internships
- Specialist Magazines & Publications e.g. Engineers Journal (Engineers Ireland)
- Notice boards/Student email account/Lecturers
- Company Presentations (On or Off-Campus)
- Local and national press – <http://www.mondotimes.com/1/world/ie>

SUMMER WORK / PART-TIME JOBS

- Be proactive – use company directories and your network and contact employers directly
- Some useful websites: www.dit.ie/jobscene; www.gradireland.com; www.ditsu.ie/welfare/employment/positions-available/; www.jobs.ie; www.spunout.ie; www.campus.ie; HiUp App; www.parttimejobs.ie

VOLUNTARY SECTOR / CHARITIES

- Volunteering/NGOs - www.dit.ie/careers/studentsgraduates/thinkingaboutvolunteering/
- DIT Student Volunteering - www.studentvolunteer.ie/dit
- Engineers Without Borders - www.ewb-ireland.org/
- Community/NGO Links - www.activelink.ie, www.volunteering.ie, www.dochas.ie, www.comhlamh.org, <http://www.wheel.ie/directory> (directory of voluntary and community organisations - need to register (directory of voluntary and community organisations - need to register)

Unadvertised Vacancies

NETWORKING

- Use help from anyone in your Network – friends, family, classmates, lecturers, neighbours, colleagues, friends from clubs & societies, team-mates, work-mates
- LinkedIn is a vital resource for networking!!!!
- See LinkedIn resources at <http://www.dit.ie/careers/studentsgraduates/resources/>
- Informational Interviewing – identify and speak to relevant people in industry
- Work Experience/Job Shadow – gain onsite experience through formal roles or observation
- Attend events, conferences, short courses, trade shows, Engineers Ireland events
- Get in touch with past guest speakers – connect on LinkedIn!
- Use First/Graduate Destination Reports to ID where past grads have gone
- Join Professional Bodies
- Join Alumni Association/Linked-in DIT Alumni group – Use Alumni function on LinkedIn
- Find a mentor i.e. someone who can advise and guide you from a career perspective
- Use contacts gained from Thesis/College work – actively build these contacts
- Keep a job hunting record

CONTACT COMPANIES DIRECTLY

- Speculative applications + cold calling.
- Contact organisation with ideas (ways to reduce costs, make them more money, speed up R+D, Your Unique Selling Point)
- Utilise directories (Also see 'Useful Links' section below) – www.kompass.com, www.idalireland.com, professional bodies e.g. Engineers Ireland, www.goldenpages.ie

ENTREPRENEURSHIP

- Freelancing/Work experience/Self-employment/Start-Up
- <http://www.dit.ie/careers/studentsgraduates/interestedinselfemployment/>
- TU Dublin Hothouse - www.dit.ie/hothouse/
- Local Enterprise Office - www.localenterprise.ie
- The Digital Hub - www.thedigitalhub.com

Start Ups:

- Start-up companies – www.startupdublin.com, dublinstartupjobs.com
- FDI and indigenous – www.makeitinireland.com, www.its happening here.ie
- <https://angel.co/> - start up jobs worldwide

Track companies

- Scholarships/Competitions/Blogs / Guest lecturer
- Check out Labour Market trends, www.careersportal.ie, IDA, IBEC (Retail/Financial Services), www.tudublin.ie/careers (labour market news)
- Search newspaper business pages on-line to get success stories on businesses as they are growing – TU Dublin Careers website (labour market news)
- Check out industry award recipients,

Other proactive ideas

- Enter competitions / scholarships
- Get Work Experience / internship
- Social networking sites (facebook, twitter, LinkedIn, Facebook, Blog, Discussion Groups)
- Linked-In (set up a profile, link to others, search for companies - employees who have
- Linked-in profiles, advertised jobs)
- Follow & target companies on facebook, linked-in, twitter

For more information on how to go about finding a job and job-hunting sites, [See www.tudublin.ie/careers](http://www.tudublin.ie/careers)

Interviews

For more information on how to perform in interviews, [See www.tudublin.ie/careers](http://www.tudublin.ie/careers)

CVs/Cover letters and applications

For information on how to put together a great CV/Cover Letter or Application, [See www.tudublin.ie/careers](http://www.tudublin.ie/careers)

Useful links (e.g. Company Databases, Professional Bodies, LinkedIn Groups)

This list contains links to some of the most useful websites for your course including professional bodies and associations, employer directories, information sources and LinkedIn groups.

General websites — useful links

- www.engineersireland.com - Engineers Ireland (Institute of Engineers Ireland)
- www.ied.org.uk - Institute of Engineering Designers
- www.imeche.org - The Institution of Mechanical Engineers (IMechE)
- www.engc.org.uk - The Engineering Council UK
- www.acei.ie - Association of Consulting Engineers Ireland
- www.irishmedtechassoc.ie - Irish Medical Device Association
- www.seai.ie - Sustainable Energy Ireland
- www.aee.ie - The Association of Energy Engineers Ireland
- www.dccae.gov.ie - Department of Communications, Climate Action & Environment
- www.energyireland.ie - Energy Ireland (info articles and list of companies)
- www.ipha.ie - Irish Pharmaceutical Healthcare Association
- www.biopharmachemireland.ie - BioPharmaChem Ireland
- http://www.ezilon.com/regional/ireland/business_and_economy/manufacturers/agriculture/index.shtml - Agricultural Engineering Company Directory
- www.acenet.co.uk - The Association of Consulting Engineers (UK)
- www.theiet.org - Institution of Engineering and Technology
- www.raeng.org.uk - Royal Academy of Engineering
- www.epsrc.ac.uk - Engineering and Physical Sciences Research Council
- www.semta.org.uk - Skills Council for Science, Engineering & Manufacturing Technologies
- www.engineeringuk.com - Engineering UK
- www.er-online.co.uk - Engineering Resources online
- www.asme.org - American Society of Mechanical Engineers
- www.energyinst.org - Renewable Energy Institute
- www.imi.org.uk - Institute of the Motor Industry
- www.aerosociety.com - Royal Aeronautical Society

There are many relevant groups on LinkedIn – do a keyword search and request to join those of interest to you. Some examples:

Sample LinkedIn Groups

- Engineers Ireland Official Group
- TU Dublin 'Graduate Network' (Alumni)
- Institute of Mechanical Engineers – iMechE (UK)
- Engineering Wall - knowledge network for engineering profession
- Mechanical Engineering Forum (subgroup of Engineering Wall)
- Mechanical Power Engineering
- Power Generation Careers
- ASME – American Society of Mechanical Engineers
- Engineering Jobs Worldwide
- Mechanical Design Engineering
- Mechanical Design Forum
- Pharmaceutical Jobs Biotech Life Sciences & Medical Devices
- Freelance Design Engineering
- Mechanical Engineers Network
- Engineering Career Opportunities (Jobs & Employment)
- Oil & Gas People

Self Employment

Ever thought of being your own boss? Think you have an innovative product or service idea that could have commercial value? Want to commercialise your research? See www.tudublin.ie/careers

Other Options (e.g. Time out, travel etc.)

Volunteering and working with communities with is a great way to gain valuable real world experience, to develop new skills, to meet new people, to do something worthwhile and to improve your employability. For more details, see www.tudublin.ie/careers.

Further Study

Are you considering further study or training? See www.tudublin.ie/careers for comprehensive information

Conversion courses

Some graduates find that their primary degree did not meet their expectations, either vocationally, academically or personally, and seek change career direction. Conversion courses offer the opportunity to diversify into another chosen career area while meeting the necessary entry requirements for that discipline. However, it should be noted that this is not the case for all disciplines e.g. disciplines such as science and engineering will require an undergraduate degree in that discipline. Search for programmes at <https://gradireland.com/further-study>.

Here are some examples of postgraduate courses pursued by graduates of your discipline:

- MEng Mechanical Engineering - TU DUBLIN
- MSc in Applied Computing for Technologists – TU DUBLIN
- MSc Engineering Computation - TU DUBLIN
- PhD Mechanical Engineering – TU DUBLIN
- ME Advanced Engineering – TU DUBLIN
- MPhil Mechanical Engineering (by research) - DCU
- Grad Diploma/MSc in Computer Aided Manufacturing & Mechanical Engineering - DCU
- Graduate Diploma/MTech in Computer Aided Engineering Product Design - UL
- MSc In Biomedical Engineering - UL
- Higher Diploma in Mechanical Engineering (Manufacturing Systems and Automation - UCC
- Postgraduate(Higher) Diploma in Education - NUI Maynooth, TCD
- MSc of Engineering Science - UCC
- Masters (by Research) in BioMedical Engineering – UCD
- Masters in Industrial System Engineering – International College/University
- Masters in Mechanical Engineering - International College/University
- PhD – DCU
- Diploma in Business Studies and IT - UCD

Chartered Engineer Recognition – Engineers Ireland

- See the following link to the Accreditation Criteria for Professional Titles: <http://www.engineersireland.ie/EngineersIreland/media/SiteMedia/services/accreditation/EngineersIrelandAccreditationCriteria2014.pdf>
- Please note that, while chartered recognition may be beneficial for career progression, not all engineering disciplines require candidates to hold chartered status to progress.

Careers open to all disciplines (Including 'Paths Into...' Series)

Many graduate vacancies don't require specific degree subjects as possession of a degree is taken as evidence of intellectual ability. What is more important to the potential employer is the range of transferable skills and experience you can demonstrate.

Many graduate training programmes take final year students from a wide range of disciplines, register with the [Career Development Centre's Jobsence](http://www.gradireland.com/career-sectors) for a full list of programmes. Here is a range of career areas that are potentially open to graduates of all disciplines. It's important to note that some of these options may require further study either on the job or beforehand.

If you are considering diversifying or changing career direction a postgraduate conversion course may be a viable option.

Some examples of career areas open to students of all disciplines:

- Teaching & Education
- Financial Services & Accounting
- Marketing, Advertising and PR
- Retail, Sales and Customer Service
- Banking, insurance and financial services
- Charities and voluntary sector
- Fund management / administration and investment banking
- Human resources, recruitment and training
- Management consulting
- Management, business and administration
- Media and publishing
- Public sector and civil service
- Social, community and youth

For further information see: www.gradireland.com/career-sectors

Labour Market Information

For information on the latest labour market trends see www.tudublin.ie/careers.

Additional Information/Advice

For any query you might have, please do not hesitate to get in touch with us.

Disclaimer: TU Dublin Career Development Centre offers advice in good faith on the basis of the best information available.
The Centre accepts no responsibility for decisions made by individuals based on such advice.