# **Structural Engineering**

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# 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 Structural Engineering graduates work include:

- Engineering Consultancies
- Construction Companies/ Contractors
- Project Management
- Environmental
- Buildings
- Highways
- · Energy/Power
- Bridges
- Rail
- Water and Public Health
- Local Authorities
- Public Bodies
- Airports
- Coastal and Marine
- Geotechnical
- · Transport planning
- Tunnelling

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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 Structural Engineering graduates include:

- Structural Engineer (Consulting)
- Structural Engineer (Contracting)
- Structural Design Engineer
- Contracts Manager
- Graduate Engineer
- · Junior Engineer
- Civil Engineer (Consulting)
- Civil Engineer (Contracting)
- Site Engineer
- Material Engineer
- Project Engineer
- Site Manager
- Project Manager
- Structural & Environmental Engineer
- Track Engineer
- Validating Engineer
- Junior Site Manager
- Environmental Inspector
- Fabrication Designer
- Quality Controller
- Land Surveyor
- Infrastructure Engineer
- Construction Buyer
- Technical Sales Engineer
- Loss Adjuster
- Graduate Programmer
- Technical Author
- Patent Agent
- Legal Services
- Secondary School Teacher

For occupational information see:

www.gradireland.com

www.careersportal.ie

www.prospects.ac.uk

# Employers who have recruited in your area

Companies who have recruited Structural Engineering graduates:

- Arup
- O'Connor Sutton Cronin
- PM Group
- Barrett Mahoney
- James Elliott Construction
- Kingspan
- DBFL
- Doherty Finnegan Kelly
- F.S.B.
- Roadbridge Ltd.
- White Young Green
- OPW
- Michael Slattery & Associates
- Cleary Doyle Contracting Ltd
- Metlab Int

# **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
•	Glassdoor (Ire):	www.glassdoor.ie
•	Gradcracker (UK):	www.gradcracker.com
•	Prospects (UK):	www.prospects.ac.uk
	TargetJobs (UK):	www.targetjobs.co.uk

Milkround (UK): 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
- 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)

# **Structural Engineering**

### **Unadvertised Vacancies**

# **NETWORKING**

- Use help from anyone in your Network friends, family, classmates, lecturers, neighbours, colleagues, friends from clubs & societies, teammates, 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.idalreland.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. itshappeninghere.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, <u>See www.tudublin.ie/careers</u>

#### Interviews

For more information on how to perform in interviews, <u>See www.tudublin.ie/careers</u>

# CVs/Cover letters and applications

For information on how to put together a great CV/Cover Letter or Application, <u>See www.tudublin.ie/careers</u>

# 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.ie Engineers Ireland (Institute of Engineers Ireland)
- <u>www.istructe.org</u> -Institution of Structural Engineers
- www.ice.org.uk Institution of Civil Engineers
- <u>www.acei.ie Association of Consulting Engineers Ireland</u>
- www.acenet.co.uk The Association of Consulting Engineers (UK)
- www.ciob.org.uk Chartered Institute of Building (CIOB)
- www.engc.org.uk The Engineering Council UK
- 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.theiet.org Institution of Engineering and Technology
- www.ied.org.uk Institute of Engineering Designers
- 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
- <u>www.energyinst.org Renewable Energy Institute</u>

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)
- Institution of Civil Engineers
- Institution of Structural Engineers
- Construction Ireland
- · Structural Engineer
- Structural Engineers and Structural Drafters/Technicians
- Engineering Jobs Worldwide: Business & Career Network
- GradEng Network
- Civil Engineer Career Network
- CIVIL/STRUCTURAL ENGINEERING NETWORK
- gradireland Graduate Careers Network
- New Civil Engineer magazine (NCE)
- Civil Engineering Jobs
- Civil Engineering Professional Network & Opportunity
- BIM Ireland
- SEAI Powering Ireland the Smart Way
- STRUCTURAL ENGINEERSUK
- Structural Engineering Jobs Permanent and Contract

# 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 <a href="https://www.tudublin.ie/careers">www.tudublin.ie/careers</a>.

# **Further Study**

Are you considering further study or training? See <a href="https://www.tudublin.ie/careers">www.tudublin.ie/careers</a> 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.

As with all choices good research and planning are very important. Here are some examples of postgraduate courses pursued by graduates of your discipline:

- ME Sustainable Infrastructure TU DUBLIN
- MSc Energy Management TU DUBLIN
- MSc Sustainability, Technology & Innovation TU DUBLIN
- PhD TU DUBLIN & elsewhere
- MSc Civil Engineering -TCD
- PG Dip / Masters in Project Management UCD, TCD
- Masters Structural Engineering TCD
- CAD/ 2-dimensional Autocad
- Masters in Applied Computing for Technology TU DUBLIN
- Masters Computer Science UCD
- Masters Industrial Engineering UCD
- Graduate Medicine UCC
- · Chartered Engineer Recognition Engineers Ireland
- PG Dip Applied Building Repair & Conservation TCD
- Masters in Education (Physics, Maths, Computer Studies) Various
- MEngSc in Civil and Environmental Engineering UCC
- MEngSc in Civil Engineering NUI Galway
- MSc/Diploma Environmental Engineering Queens University Belfast

# 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 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 <a href="https://www.tudublin.ie/careers">www.tudublin.ie/careers</a>.

## 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.