

Physics

Your Careers Adviser
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www.tudublin.ie/careers

Skills developed in college

You have 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. Here 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 yourself in a group and in one to one situations. Showing a range of verbal and nonverbal signals to demonstrate that the information being received is understood. You have negotiated your way through complex communications on various projects you've participated in, from initial briefing, through to report writing and presenting to varied audiences.
- **Teamwork / Working with Others**
Working effectively and confidently within a group to achieve a common goal or task. This means that you understand your role within the team, as well as listen and support the other team members. Teamwork skills are developed in group projects in college as well in sporting clubs and college societies
- **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. Having an eye for detail as well as the ability to adopt a common sense approach to solving problems under pressure has been something you've learned during your work.
- **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. You have juggled course deadlines and assignments with part-time work or involvement in extra-curricular activities. This demonstrates that you are organised and can manage your time. Complex construction projects require effective organisation and time management if they are to be delivered to budget and on time.

- **Planning and Organising**
Establishing a course of action for self and/or others to accomplish a specific goal. Allocating resources appropriately.
- **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 (flexibility)**
Making decisions and taking action. Maintaining performance under pressure and / or opposition.

You will also have developed a wide range of technical / specific course related skills which you should include in your CV – these will include specific lab methodologies and processes; use of equipment and experience with health and safety protocols

Types of employers/industry sectors

Employers of physics graduates include academic institutions, government research organisations and industry.

Industries employing physicists are varied and include:

- aerospace and defence
- education – teaching second and third level
- engineering
- instrumentation
- medical devices
- manufacturing
- oil and gas
- medicine and healthcare
- science and telecommunications
- Electronics
- Materials science
- aerospace engineering
- energy and power provision – renewable energy
- environmental consultancy
- manufacturing (including computers, electronics, medical equipment)
- medical technologies
- patent work
- research and development
- scientific publishing
- Meteorology and climate change
- telecommunications - Optoelectronics, microwave technology and satellite communications
- water and environmental control
- space exploration

Physics graduates not directly using their physics degree can pursue careers in a range of sectors such as IT and consultancy, the environmental industry, financial services, legal sector, transport and utilities.

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 related to your degree include:

- Geophysicist/field seismologist
- Higher education lecturer
- Secondary school teacher
- Metallurgist
- Econophysicist
- Laser physicist
- Nanotechnologist
- Radiation protection practitioner
- Research scientist (physical sciences)
- Medical Physicist (requires further training)
- Astrophysicist
- Solar Energy Physicist
- Clinical Scientist
- Patent Officer
- Materials Scientist
- Science Communicator
- Particle Physicist
- Science Journalist

Jobs where your degree would be useful include:

- Investment analyst
- Games Development
- Meteorologist
- Nuclear engineer
- Operational researcher
- Patent attorney
- PPC specialist
- Compliance officer
- Systems developer

Remember that many employers accept applications from graduates with any degree subject, so don't restrict your thinking to the jobs listed here.

For occupational information see

www.gradireland.com
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www.targetjobs.co.uk

Employers who have recruited in your area

Some of the companies who have recruited Physics graduates include:

- British Telecom (B.T.) - Technician
- Optrase - Researcher
- ProPhotonix - Optical Engineer
- MQI Radio Chemist
- Intel - Maintenance Technician; Process Specialist; Bio process Technician
- Carl Stewart Ltd. Technical Specialist
- Mater Hospital - Medical Physics Dept.
- PPD - Assistant Scientist
- Service and Calibration Solutions - Service and Calibration Engineer

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

www.prospects.ac.uk & www.targetjobs.co.uk

Graduate jobs UK

www.gradireland.com

Immediate jobs/Summer/Graduate programmes

www.mondotimes.com

Local and national press

NHS Scientist training programme - <http://www.nshcs.hee.nhs.uk/join-programme/nhs-scientist-training-programme>

"Bright Recruits" – IOP site which offers a range of opportunities for jobseekers with a background in physics or engineering; <http://brightrecruits.com>

www.publicjobs.ie

www.localgovernmentjobs.ie

Public service

www.irishjobs.ie/agencies

Complete list of recruitment agencies/online recruitment sites

Company Websites - Immediate vacancies and Internships

www.indeed.ie – Ireland (various job boards)

irishjobfairy (twitter)

Other

- Careers fairs – Gradireland Fair – Autumn and Summer Fair, plus many others.
- Notice boards/Student email account/Lecturers
- Company Presentations
- Specialist Magazines

Voluntary Sector/Charities

www.activelink.ie

Voluntary Sector/Charity/NGO vacancies in voluntary sector

www.volunteeringireland.com

www.dochas.ie

Association of non-governmental development organisations

www.comhlamh.org

Volunteering opportunities

www.wheel.ie/directory

Directory of voluntary and community organisations

Unadvertised Jobs

NETWORKING

- Job Shadow/Informational Interviewing/work experience
- Networking – who is in your network?
- Professional Bodies,
- Social networking sites (facebook, twitter, LinkedIn, Facebook, Blogs, discussion boards)
- Attend events,
- Businessandleadership.com (events)
- Get in touch with guest speakers
- Thesis / College projects/Placement/Site visits/guest speakers
- TU Dublin Societies
- First Destination Reports
- Join Alumni Association/Linked-in TU Dublin Alumni group

CONTACT COMPANIES DIRECTLY

- Speculative applications + cold calling. Think about your offering
- Contact organisation with ideas
- Utilise directories – Kompass.com, IDA, professional bodies, Golden Pages

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

TRACK COMPANIES

- Check out Labour Market trends, ilo.org (Intl Labour Organisation, www.careersportal.ie, IDA, IBEC
- Search newspaper business pages on-line to get success stories on businesses as they are growing – TU Dublin Careers website (labour market news)
- Industry award recipients
- Best Workplaces in Ireland (download on gradireland.com)
- Follow target companies on facebook, linked-in, twitter
- Think of small companies not just big brands

OTHER PROACTIVE IDEAS

- 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, LinkedIn, Twitter
- Think of small companies not just big brands
- Consider alternative roles
- Undertake voluntary work

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

Useful Websites

- [Careers from Physics www.physics.org/careers.asp?contentid=381](http://www.physics.org/careers.asp?contentid=381)
- [IOP Ireland - Careers Information for Irish Context – 28 Profiles www.iopireland.org/careers/index.html](http://iopireland.org/careers/index.html)
- [Science Careers http://sciencecareers.sciencemag.org/career-development/europe](http://sciencecareers.sciencemag.org/career-development/europe)
- [National Scheme for Training Clinical Scientists www.nhsclinicalscientists.info](http://nhsclinicalscientists.info)
- [Institute of Physics and Engineering in Medicine www.ipem.ac.uk](http://www.ipem.ac.uk)
- [Society of Radiographers www.sor.org](http://www.sor.org)
- [Audiological Scientists www.baaudiology.org](http://www.baaudiology.org)
- [Earthworks Job \(Oil, Gas, Geo and Renewables\) www.earthworks-jobs.com/](http://www.earthworks-jobs.com/)
- [New Scientist Jobs http://jobs.newscientist.com/en-gb/](http://jobs.newscientist.com/en-gb/)

Energy

- www.seai.ie Sustainable Energy Authority of Ireland
- www.energyireland.ie Energy Ireland
- www.iwea.com Irish Wind Energy Association
- www.bwea.com British Wind Energy Association
- www.greenfutures.org.uk Green Futures
- www.greencareersguide.com

Medical Devices

<http://www.irishmedtechassoc.ie> Irish Medical Devices Association

Aerospace

<http://www.faei.ie/Sectors/FAEI/FAEI.nsf/vPages/Home?OpenDocument>

Plastics

http://www.plasticsireland.ie/Sectors/PI/PI.nsf/vPages/About_Us~member-directory?OpenDocument

Telecommunications

http://www.tif.ie/Sectors/TIF/TIF.nsf/vPages/About_Us~member-directory?OpenDocument

Company listings

<http://www.top1000.ie/industries/technology>

<http://www.top1000.ie/industries/energy>

<http://www.top1000.ie/industries/manufacturing>

DIT library databases – comprehensive listing of companies and commercial information in Ireland by sector

Linkedin Profiles and Groups

<https://ie.linkedin.com/company/institute-of-physics>

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

Further Study

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

Here are some examples of postgraduate courses pursued by Physics Graduates :

- MSc Physical Sciences in Medicine – TCD
- Medical Physics – NUIG
- PHD - TU Dublin
- MSc – Physics - UCD
- Commerce and Business Studies Masters Taught (Postgraduate)
Business Analytics - UCD Michael Smurfit Graduate Business

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.

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.

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.