

Options with computer science/IT

Your skills

Over the course of your degree you develop a good mix of subject specific and technical skills as well as transferable core skills. Consider these alongside your other activities, such as paid work, volunteering, family responsibilities, sport, membership of societies, leadership roles, etc. Think about how these can be used as evidence of your skills and personal attributes. Then you can start to market and sell who you *really* are, identify what you may be lacking and consider how to improve your profile.

Computer science/IT degrees vary widely in content but generally combine theoretical study and practical hands-on projects. You gain a wide range of knowledge and skills taken from a variety of disciplines such as engineering, mathematics, psychology and even marketing and design.

Theoretical knowledge you acquire, including analysis, prediction, logic, modelling and frameworks, and ethics also gives you valuable skills.

Programming languages, hardware architecture and construction, network design and engineering, software engineering, multimedia design, software tools and packages and other technical aspects of your degree are sought-after skills in the workplace and opportunities to develop your skills and gain practical experience of these during your course should be maximised.

Employers are interested in not only the practical skills you have gained, but also the non-technical transferable skills. You develop skills such as innovation, and the adaptability to cope with rapid change in technology. Your course teaches you a disciplined approach to analysing problems, how to design creative solutions, and the ability to critically evaluate the results. Practical projects during your course also develop your communication and interpersonal skills, teamwork and leadership skills, time management, report writing and presentation skills.

Job options

Bear in mind that it's not just your degree discipline that determines your options. Look at [your degree... what next?](#) for informed advice on career planning and graduate employment, or take a look at [what jobs would suit me?](#) a helpful starting point for self-analysis.

You can choose between jobs that are degree-related or those that appeal because they use other interests or elements of your degree.

Jobs directly related to your degree

- [Database administrator](#) - responsible for the usage, accuracy, efficiency, security, maintenance, administration and development of an organisation's computerised databases.
- [Information systems manager](#) - works with staff of technical specialists to provide and maintain an organisation's hardware and software technology infrastructures. Also called service delivery managers.
- [Technical support officer \(IT\)](#) - monitors and maintains the computer systems and networks of an organisation. Installs and configures computer systems, diagnoses hardware/software faults and solves technical problems, either over the phone or face to face. Also called IT support officer.
- [Applications developer](#) - writes programs for technical,

commercial and business users. Usually working in a team, applications developers create a program to agreed specifications and produce detailed supporting documentation.

- [IT consultant](#) - gives objective advice on the best use of IT to solve business problems.
- [Multimedia programmer/Web designer](#) - works in a team to write programs that bring together text, sound, artwork, 2D/3D modelling, animation, video and virtual reality to create a multimedia product e.g. for websites and computer games.
- [Network engineer](#) - also called systems administrator, ensures the service and network infrastructure is maintained to maximise efficiency. This involves installing and supporting new servers, hardware and software, allocating resources and providing technical support to end users.
- [Software engineer](#) - researches, designs, tests, implements and maintains software systems to meet client or employer needs. Software engineers use a variety of computer programming languages and applications, working in teams with other IT professionals, or alone.
- [Systems/business analyst](#) - designs new IT systems from a technical specification, and is responsible for installing them, testing and maintenance. The job may incorporate a systems developer or consultant role.

Jobs where your degree would be useful

- [IT sales professional](#) - offers three main areas of pre-sales information about products, negotiating sales, and finally post-sales support of hardware and software.
- [IT trainer](#) - delivers training in two main areas: desktop applications and specific software. Others deliver more technical-based training to software engineers, technicians, or those developing their skills in the operational languages used by computers
- [Technical author](#) - communicates technical messages to a specific audience at levels the user can fully understand. This involves understanding the technology, then designing and writing documentation.

Other options

International employers may offer opportunities for secondment abroad. Once an experienced IT professional, you may be able to work freelance or as a contractor. Charities and non-governmental organisations (NGOs) may have opportunities for teaching IT, whether as a volunteer or as a paid employer, both in the UK and overseas. Many experienced IT professionals start their own businesses.

Although some of the jobs listed here might not be first jobs for many graduates, they are among the many realistic possibilities with your degree, provided you can demonstrate you have the attributes employers are looking for. It's also worth noting that many graduate vacancies don't specify particular degree disciplines, so don't restrict your thinking to the jobs listed here.

[Explore types of jobs](#) to find out more about the above options and related jobs.

Career areas

Every year statistics are collected to show what HE students do immediately after graduation. These can be a useful guide but, in reality, with the data being collected within just six months of graduation, many graduates are travelling, waiting to start a course, paying off debts, getting work experience or still deciding what they want to do. For further information about some of the areas of employment commonly entered by graduates of any degree discipline, check out [what do graduates do?](#) and [your degree...what next?](#)

In 2007, six months after graduation, 60% of computing/IT graduates were in full-time work, 7% were in part-time work and 6% combined work and study. 11% were assumed to be unemployed. Of those in full-time employment, 46% were working in the information technology sector and 11% were working in commercial, industrial, engineering or public sector organisations.

Typical first jobs include graduate trainee and entry-level positions as programmers, web developers, help-desk support, and consultants. First roles are often as a junior member of a project team, with progression depending on individual situations.

Where are the jobs?

There are almost 580,000 people working in companies in the UK whose primary function and business is IT. In addition, there are almost 590,000 IT professionals working in other sectors in the UK. Almost all businesses and organisations use IT. Many large organisations have their own in-house IT departments, and many others hire external firms to provide advice and support. For this reason, entry-level positions exist in the IT industry, with consultancies and IT service providers, in commerce, especially in finance and retail, and in the public sector. Key sectors for hardware and software development are e-commerce, telecoms, aerospace and defence.

Further information can be found in the [information technology](#) sector.

Career management is an ongoing process; one that you'll no doubt develop throughout your working life. [Explore job sectors](#) for further information on all the above employment areas.

Further study

Around 15% of graduates go on to some form of further study, usually studying in greater depth through an MSc or PhD. This is essential for an academic career in higher education, and can also improve your career prospects. Often, further study is undertaken to specialise in a particular area and this can be useful when considering a career in developing new technologies and products such as internet security and e-business services. Employers like postgraduates with commercial awareness, so it is worth researching predicted growth in areas when choosing your subject.

You can combine work with study through Knowledge Transfer Partnerships (KTPs) (<http://www.ktponline.org.uk>).

You could teach ICT in secondary schools after taking a Postgraduate Certificate in Education (PGCE), or Professional Graduate Diploma in Education (PGDE) in Scotland.

These trends show only what previous graduates in your subject did immediately upon graduating. Over the course of their career - the first few years in particular - many others will opt for some form of further study, either part time or full time. If further study interests you, start by thinking [about postgrad study](#). [Find courses and research](#) to identify your options; you can also [apply for courses online](#).

Look at [funding my further study](#) for more details relating to finance and the application process.

What next?

Don't forget there are alternatives to entering employment or postgraduate study, such as taking time out, volunteering or travelling. Longer term, you may want to consider starting your own business. For something different, check out [self-employment](#) and [flexible working](#) or explore [working and studying abroad](#).

This should have started you thinking about your future. Whether you are in the early stages of career planning, or you have definite ideas about what you want to do, you will find further information to help you in the following sections:

- Analyse your skills, interests and motivations to find out [what jobs would suit me?](#)
- [Explore types of jobs](#) to find out about entry requirements, salaries and working conditions.
- [Explore job sectors](#) for hints on breaking into various industries.
- [Find graduate employers](#) and see what they have to offer.
- Look at the advice on [applications, CVs and interviews](#).
- Get [work experience](#) through vacation work or a work placement.
- [Find courses and research](#) and investigate postgraduate study opportunities.
- If you have already graduated, get online [interactive advice](#).
- Visit [your university careers service](#) for a wealth of advice and resources to help with your career planning.

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