



# COMPUTING ROUTES

## SUBJECT PATHWAYS

### CAREERS

Nearly all jobs require some IT skills so this subject can be useful no matter you do after school. Many (though not all) careers directly related to computer science need higher education (and sometimes post graduate) qualifications. Computer science, information technology, computing, engineering, maths, sciences or business management systems are just some of the higher education courses available. Some other degree subjects are acceptable too if you have the right skills. Check the entry requirements for each career.

- AI software developer
- Business analyst
- Computer games designer
- Computer service technician
- Data analyst
- Database administrator
- E learning developer
- Face recognition developer
- Games developer
- Helpdesk adviser
- Information security analyst
- Information systems manager
- IT consultant
- IT project manager
- IT sales consultant
- IT systems architect
- IT technician
- IT trainer
- Multimedia programmer
- Network engineer
- Robotic scientist
- Search engine optimiser
- Software engineer
- Systems analyst
- Systems developer
- Teacher / lecturer
- Technical author
- User experience (UX) analyst
- Web developer

# SKILLS

Studying computer science can also help you develop wider skills such as:

- Accuracy
- Analysis and reasoning
- Attention to detail
- Communication
- Creative thinking
- IT
- Logical thinking
- Organising
- Problem solving
- Report writing
- Teamwork
- Time management
- Using numbers
- Working independently

These skills are needed for many jobs at different levels and with a range of entry routes, including apprenticeships and further or higher education. Here's a selection:

- Accountant
- Accounting technician
- Administrative assistant
- Archivist
- Cartographer
- Customer services assistant
- Data entry clerk
- Digital marketing officer
- Electrician
- Financial adviser
- Indexer
- Information scientist
- Librarian
- Library assistant
- Media researcher
- Motor vehicle technician
- Office equipment technician
- Office manager
- Payroll clerk
- Retail manager
- Sales assistant
- Social media manager
- Switchboard operator
- Telecoms technician
- Warehouse assistant
- Web writer

## DID YOU KNOW?

The first computers were so large, they took up a whole room but now some of them are no bigger than a grain of rice!

# ROUTES

There are different routes into many careers, including full time study, higher education and apprenticeships. Whichever route you choose, you will probably need good grades in English and maths.

Higher and degree apprenticeships are being developed in the digital technologies. These should offer university level study while you work and earn a wage.

You may need maths at A Level or equivalent to study computer science at university. Higher education courses in subjects such as computing or IT may have more flexible requirements or you can sometimes follow a foundation year if you don't have the right subjects. Make sure you do your research as there are many different course titles. Some higher education courses have similar names but different content and teaching methods. This is a fast moving sector so you will need to update your skills throughout your career.

## FIND OUT MORE

For more job ideas, visit [nationalcareersservice.direct.gov.uk/youngpeople](https://nationalcareersservice.direct.gov.uk/youngpeople) then follow links to 'Aged 13-19' and 'Do something you're good at'.

If you're thinking about higher education, visit: [www.prospects.ac.uk](http://www.prospects.ac.uk) to see what art and design graduates have done after their degree.

### Other websites

[thetechpartnership.com](http://thetechpartnership.com)

[creativeskillset.org](http://creativeskillset.org)

[sheffieldfutures.org.uk](http://sheffieldfutures.org.uk)

[ucasprogress.com](http://ucasprogress.com)

[ucas.com](http://ucas.com)

[icould.com](http://icould.com)