
Resource Materials: Unit 12 Publishing

INFORMATION ABOUT CAREERS IN IT

Computer Operator

Computer operators oversee the day-to-day running of a computer system helping to run computerised jobs prepared by programmers or operations managers. They solve straightforward operational problems as soon as they happen.

They may be involved in:

- Starting up and closing down the system correctly
- Scheduling and loading programs and data
- Keying in instructions using a mouse and keyboard
- Keeping a record or log of the work as it is completed
- Collating print-outs
- Loading paper, tapes or disks
- Keeping equipment clean.

Computer operators usually work 37 to 40 hours a week. Some work shifts, including evenings and weekends. Working areas are clean and air-conditioned.

Salaries for computer operators usually start at around £12,000 a year, rising to around £30,000 or more for senior operators.

Computer operators should:

- Be familiar with the business operations of their organisation
- Have some knowledge of computers
- Be able to pay attention to detail
- Be able to work methodically on a variety of tasks
- Be able to work well under pressure.

Employers in this field are usually large companies or organisations with a lot of data to process using large mainframe systems. These might include chain stores, government departments, direct marketing companies, manufacturers, or gas and electricity companies. Operators also work for computer or data-processing companies and agencies.

There are no set entry requirements, but applicants with GCSEs/S grades (A-D/1-4) in subjects such as maths, IT and English would be at an advantage. Many computer operators start as clerical workers, and acquire IT skills in their work. They then go on to develop these skills through in-house training or part-time further education. Apprenticeships may be available.

Promotion is possible, usually to senior operator, shift leader or department manager. There are opportunities to move into other areas of computing, such as programming or technical support.

IT Trainer

An IT trainer is responsible for teaching individuals how to use, and benefit from, ICT systems.

The job is very varied. IT trainers will spend part of their week planning courses, and the remainder travelling to different locations to teach them. Courses can range from a few hours to several days.

An IT trainer will generally work between 37 and 40 hours a week, from 9am to 5pm, Monday to Friday. Depending on their employer, they may be required to work evenings or weekends. It is possible to work flexible or part-time hours.

Salaries range from about £20,000 a year for new IT trainers, to more than £30,000 for senior trainers.

An IT trainer will need:

- A thorough and up-to-date knowledge of hardware and software
- Excellent interpersonal skills and the ability to adapt their approach depending on their audience
- To be energetic, committed and patient.

It is important to enjoy both working alone, and working in a classroom environment.

There are over 60,000 IT trainers in the UK. Opportunities exist throughout the country. There are various concentrated areas of employment, e.g. the south-east of England.

There are no set qualifications to work as an IT trainer and there are many different routes into this work. There is no set age limit. Maturity and experience can be an advantage when training people of all ages from different backgrounds.

An IT trainer can develop their career by progressing to senior trainer, developing management skills, or setting up as a freelance trainer.

Depending on their skills and interests, IT trainers can also move into different types of ICT work, or develop their training skills to include other business-related subjects.

Service Technician: Computers

Service technicians install and maintain computer equipment. They usually specialise in one area of operation - or even one type of computer. They may work on:

- Preparing estimates for new installations
- Preparing the equipment for a new installation
- Transporting and installing new equipment
- Operating maintenance programmes for clients
- Upgrading existing computer equipment
- Routine testing and tracing faults.

Service technicians work a 37 to 40-hour week. Shifts and call-out work may be required. The work is mainly indoors, but they may need to travel out to customers.

Trainee technicians start on around £10,000 a year, but highly qualified technicians or specialists can earn as much as £40,000.

Computer service technicians should:

- Be interested in computers and technology
- Be patient and persistent in solving problems and finding faults
- Have good practical skills
- Be able to work quickly and under pressure.

The main employers are:

- Insurance companies, banks, supermarkets and government organisations
- Manufacturers of IT technology and IT business service providers
- The small or medium-sized contractors who service and support contracts.

Technicians may have to be multi-skilled and offer a broad range of experience with different equipment and technology.

Entry is normally through a Modern Apprenticeship, or through study for NVQs/SVQs or BTEC/SQA awards.

Some work self-employed or freelance, supporting small and medium-sized businesses.

IT Product Developer

Product developers create new products to be sold by information technology (IT) organisations.

Typical projects for a product developer include designing new software, working on a new generation of mobile communications or creating new computer games. They would:

- Research a possible product and estimate how much it is likely to cost
- Produce a detailed design and then test the new product in real-life situations
- Write instructions for users of the new product.

In large companies they tend to specialise in one aspect of product development.

Most product developers work 9am to 5.30pm, although some companies offer flexible working hours. They are usually based in an open-plan office where there is space to set up projects and carry out tests.

Salaries can range from about £18,000 for new entrants, to about £40,000 for experienced developers.

A product developer needs to be:

- A creative thinker
- A good problem solver
- Knowledgeable about IT systems
- Able to explain technical matters clearly
- Persuasive
- Able to get on well with others.

Employers are spread throughout the UK and include computer manufacturers and software houses, IT and management consultancies, and private companies and public organisations.

Most product developers have a degree, HND or HNC in an IT-related subject. However, employers do train graduates with degrees in non-related subjects. The usual entry requirement for a degree is a minimum of five GCSEs/S grades (A-C/1-3) and two A levels/three H grades, or equivalent qualifications.

Mature entrants may find it difficult to enter unless they have relevant experience or training.

Training is usually available on the job or through specialist courses led by the major hardware and software suppliers.

Promotion is to senior developer and project management roles. Some developers work on a freelance or consultancy basis.

IT Technical Sales Specialist

Technical sales specialists sell hardware and software produced by information technology (IT) companies.

They usually specialise in developing relationships with existing clients, or introducing themselves and their company's products to new individuals and organisations.

The products they sell are often expensive and complex, and it can take several months before the sale can be finalised.

They work within a set geographical area. This could be part of a large city such as Glasgow or London or it might cover an entire region such as East Anglia or South Wales.

Technical sales specialists work office hours, but may work longer hours when necessary. Increasingly, they may work primarily from home rather than be based at their company's offices. The work involves a lot of travel, and a driving licence is normally required.

Salaries range from £15,000 to £50,000, plus commission.

A technical sales specialist should:

- Have a great deal of IT technical knowledge
- Get on well with people
- Be able to talk clearly to individuals and groups who may not understand a great deal about IT systems
- Have good business sense
- Have good negotiating and sales skills.

Technical sales specialists work for companies producing computer hardware or software, and jobs can be found throughout the UK.

Technical sales specialists usually have a degree, HND or HNC in a computer-related subject. Entry to a degree course is with a minimum of two A levels/three H grades and five GCSEs/S grades (A-C/1-3). However, some people may move from another area of IT into technical sales and here qualifications are less important than their experience and knowledge of the products.

Most employers offer in-service training and possibly external short courses. It is possible to progress to more senior posts and into sales management. Some may move into training or consultancy.

Network Manager

Network managers install and maintain computer networks, and ensure that people can access information from the network when they need it.

This can involve:

- Designing, setting up and maintaining computer networks
- Training staff
- Providing technical support
- Monitoring file use and making sure security is adequate
- Planning and implementing future developments.

Network managers normally work 37 to 40 hours a week, Monday to Friday, but may need to work outside these hours when installing systems or on call for breakdowns. Network managers usually work in an office, and may be based at one site or may travel between sites.

Typical starting salaries for trainee network managers are about £17,000 a year. This can rise to £40,000 or more for a senior network manager.

Network managers should:

- Be interested in IT and solving problems
- Have excellent knowledge of existing hardware and software
- Have a logical, analytical approach
- Have good communication skills
- Be able to collate complex data and use this to solve problems
- Be able to work in a team.

Network managers may be employed by large organisations, including manufacturers and retailers, financial organisations, hospitals and health trusts, government and the media. They may also work as consultants for a number of smaller clients.

Many network managers have a degree or HND/HNC in computer studies or IT. Others have taken college courses or have backgrounds in other IT functions. However, mature applicants may have difficulty getting in unless they have relevant business experience and some IT training.

The majority of training is done on the job, with short in-house or external courses to cover technical training on new systems and languages.

Promotion to senior network manager and then to project manager is the common route for career progression. There are also opportunities to become self-employed or work as a consultant.

Software Developer

Software developers design, install, test and maintain software systems used by commercial and manufacturing organisations in their IT systems.

In the past, systems were often replaced due to rapid developments in technology, which was time consuming and expensive. Now, more often, new software packages are integrated into an existing system, so only the linking code has to be created.

Software developers need:

- A thorough understanding of the user's needs
- To look at any existing system being used
- To work out a solution and present a proposal to the user
- To make sure the proposal is accurately costed.

The software developer would then lead a team which:

- Produces detailed design specifications
- Writes and documents the programming code
- Decides on and designs the software
- Implements a test plan.

Working hours are typically 37 to 40 hours per week. In higher paid consultant jobs, a flexible approach to hours is usual. The work is office based but is likely to involve travel to meet clients and work on their premises.

New entrants start on around £18,000, which could rise to £70,000 or more for a team leader.

Software developers should have:

- Expert knowledge of current computer hardware and software
- Effective communication skills
- Some mathematical ability
- Analytical, technical and commercial skills.

Software developers are now employed across the whole range of commerce and industry, public services, utilities, defence and research. They can also work overseas.

The usual entry requirement is a degree or HND/HNC. Although this is not essential, it is becoming increasingly unusual not to have a qualification at this level. Older entrants will need extensive business and IT experience.

Employers provide higher level training in programming, systems analysis and in software. Promotion is normally to senior or principal developer and then to project manager.

Database Operations Manager

Database operations managers plan and maintain databases and the information in them so that users can easily access the information they need in their jobs.

In modern databases, data is organised in such a way that:

- Users can only access or update information relevant to their agreed functions
- Data remains consistent across the whole system.

A database operations manager is responsible for a number of tasks, including:

- Finding out the requirements of users and the anticipated flows of data for a new or modified database
- Planning a database from rough ideas ('conceptual' design)
- Setting up and testing new systems
- Maintaining the security and integrity of the information contained on the database.

Most database operations managers work 37 to 40 hours a week. They may be required to be on call if breakdowns occur outside normal working hours or work extra hours to meet deadlines. The work is carried out in a modern office environment.

Salaries range from around £15,000 to £53,000 a year.

A database operations manager needs:

- Good IT skills, including ideally some knowledge of database systems
- A logical mind, to be able to find ways to solve problems
- Excellent communication and negotiation skills
- A detailed understanding of customers' business needs.

Database operations managers work for organisations with large-scale information requirements. These could include, e.g. schools and universities, the National Health Service, central and local government departments, financial institutions, retail businesses, manufacturing firms, and IT and computer companies offering database solutions.

A degree or HNC/HND related to IT is useful, but not essential. Other qualifications may be acceptable, such as BTEC national diplomas and NVQs/SVQs. Adult entry is possible, particularly for people with relevant business experience and a solid grounding in IT.

Much of the training is on the job, supplemented by short internal or external courses.

It is possible for database operations managers to move into other areas within IT such as database design, project management, network management or systems analysis.

Internet/Web Professional

An internet/web professional may perform one or all of the following roles:

- A web designer, responsible for the design, layout and coding of web pages
- An information architect, who plans how the content will be managed and displayed
- A webmaster or web developer, dealing with the more sophisticated websites that handle online enquiries, search engine optimisation and web hosting
- An account/project manager, co-ordinating all these aspects over different projects.

As employees, internet/web professionals might work 37 to 40 hours a week, Monday to Friday, and possibly some evenings and weekends. Self-employed professionals work the hours necessary to meet their workload. The work is office-based.

Earnings range from around £17,500 to £40,000 or significantly more. Income for self-employed professionals or contractors may be higher, according to their ability and reputation.

Internet/web professionals should:

- Be creative and imaginative
- Have good written and verbal skills
- Enjoy working with computers
- Have a good knowledge of how the internet works
- Enjoy solving problems
- Be able to meet deadlines
- Be able to work in a team.

This is still a new and rapidly developing area of work, with growing opportunities in fields such as 'e-commerce' (e.g. online shopping). Typical employers include specialist and internet service producers, publishers, graphic design companies, private companies with in-house websites and public sector organisations.

Most internet/web professionals have a degree, HND or HNC. A degree requires at least two A levels/three H grades and five GCSEs/S grades (A-C/1-3). An artistic background with a relevant qualification in IT can be very useful. It is important to build up a strong portfolio of experience in designing web pages and this may compensate for lack of formal qualifications. There is no upper age limit for starting in this work.

The majority of training is done on the job, with short courses (in-house or external) to cover technical training on specialist new systems and new code.

In large companies and organisations there may be opportunities for promotion to project manager level. Many internet/web professionals work on a freelance or contract basis.

Systems Analyst

Systems analysts are IT specialists who design computer systems and create business solutions for larger users such as banks, supermarkets, insurance companies or government departments.

The job involves:

- Investigating and analysing a business problem in detail
- Specifying one or more designs for a computer system or business approach that will solve the problem.

Most systems analysts work 37 to 40 hours a week. Overtime and weekend working may be required to meet deadlines. The work is office based, but may involve travel to clients' premises.

Salaries range from about £25,000 for newly-qualified systems analysts, to £50,000 or more for very senior jobs.

Systems analysts should:

- Be interested in IT
- Have effective communication skills
- Be able to work in a team, discussing ideas with non-technical people
- Be patient and persevering
- Be able to concentrate for long periods
- Have some mathematical ability
- Have business-related experience.

Systems analysts are now employed across the whole range of commerce and industry, public services, utilities, defence and research. There are many opportunities overseas.

The most usual qualification is a degree or HND/HNC, although some people start as trainee programmers, with A levels or equivalent qualifications.

Adult entry is often possible. Many people develop computer skills working in other fields, such as financial services, insurance, banking or accounting.

Promotion to senior or principal analyst and then to project manager is possible. Alternatively, experienced analysts can become self-employed and work on a contract or consultancy basis.

Helpdesk Professional

Helpdesk professionals are an essential part of any company's IT support team.

They often provide the first point of contact for people experiencing difficulties with their hardware or software.

By telephone, e-mail or in person, helpdesk professionals go through a series of questions to identify the fault, then systematically work through all of the responses to arrive at a solution.

They usually work a 37 to 40-hour week, which can involve weekend and evening shifts. They work in an office environment, although some jobs involve travel between sites.

Salaries range from £17,000 for new starters, up to £30,000 for some senior helpdesk professionals.

Helpdesk professionals need:

- Up-to-date knowledge of the technology callers are using
- Excellent communication skills
- The ability to think methodically and logically.

There are several ways to get into helpdesk work: either straight from school, through a Modern Apprenticeship, or after a full-time course.

Adults can enter this work if they have experience of the computer system and business area of the particular employer. Some employers ask for a degree, HNC/D or a certificate in one of the main vendor software systems such as Microsoft.

Most training is done on the job, supplemented by short technical courses.

There are jobs in organisations such as hospitals, colleges, local authorities, broadcasters, publishers, banks, stores, the Civil Service and the armed forces. Helpdesk professionals can join independent IT support firms or hardware and software manufacturers' after-sales support teams.

Promotion may be to team leader or departmental manager, or helpdesk professionals sometimes move into other areas of IT.

Source:- www.connexions.gov.uk/