

# Options@16 - Working in Computing and Information Technology



Computer development continues at a phenomenal rate. This means that computer usage and type varies enormously, ranging from the small personal computer (including laptop portable computers) you will have them at school or one at home, to the very large main-frames that are kept in separate rooms or buildings.

The growth of Internet usage both for personal and business usage has also seen demand for computers massively increase.

Working with computers falls into two broad categories

## 1. Using and Maintaining Computers

### Examples of jobs

**Computer/Software Sales Assistant** work in stores selling computers and computer-related goods. They help customers to choose the products that best meet their needs, and perform all the tasks necessary to complete the sale.

**Computer Data Input Operator** uses a keyboard to enter information into computer systems. They deal with text and numerical data, putting the information in the required format. Many operators also have other office duties.

**Computer HelpDesk Operator** deals with telephone calls and emails from people who are having problems with computer hardware or software. They find out what the problem is and then try to find a solution for the caller. They work for manufacturers and suppliers of hardware and software, Internet service providers and large organisations whose staff use computers in their work.

**Computer Service Technician** maintains, updates and services computer equipment and software within organisations. They usually specialise in one area of operation, or one type of computer.

## 2. Research, Design and Development

This involves updating existing computer systems or designing new ones. Such jobs may require higher qualifications such as degrees or foundation degrees.

### Examples of jobs

**Computer Games Designer** creates ideas for computer games and help to determine the way they look and play. They begin with an outline of the game and then produce specifications for the game's art, sound and interface (the connections through which the user interacts with the game).

**Computer Applications Programmer** writes and tests computer programs. They write instructions in a language that the computer can read, enabling it to carry out tasks such as controlling stock or keeping records of sales. Programmers work out the logical steps needed to create the program; they test it and keep careful records, so the program can be adapted later.

**Computer Systems Analyst** adapts and designs information systems to help organisations work more quickly and efficiently. They work closely with staff at all levels to find out the problems people have with the existing system, and what they hope a new system will achieve. Analysts produce a specification for a system that will meet the organisation's needs.

**Internet Website Designer** uses a combination of design and IT skills to produce web pages for the Internet. They need to achieve a balance between interesting design and ease of use.

## What will the job be like?

Computers are used in a wide variety of workplaces. This could be in a warehouse or a specialist computer building owned by a large organisation. Computers are very widely used in offices and so working hours tend to be office hours 900am – 500pm (Monday to Friday).

Specialist computer workers such as computer application programmers and computer system analysts may need to work shifts or at weekends. There may also be an element of travelling and working away from home.

### Skills checklist:

- Be patient and able to pay good attention to detail, when making routine checks on the system.
- Have an analytical mind and good problem-solving skills.
- Have good communication skills to explain problems clearly.
- Keep accurate written records.
- Keep information secure and confidential.
- Think quickly and cope well with pressure.
- Use your initiative.
- Work both on your own and in a team.
- Work logically and methodically, and follow set procedures.

## How much will I get paid and what are the opportunities?

### Computer/Software Sales Assistant

They earn in the range of £200 - £230 a week, rising to £270 - £340. Higher earners can make around £440 a week. Sales assistants usually work a basic 35-39 hours per week. However, they may be required to work in the evenings or at weekends and receive overtime pay or time off in lieu. Many retail assistants are employed on a part-time basis and there may be opportunities for casual work during busy periods, for example, at Christmas. Computer sales assistants work in a range of outlets: small specialist computer shops, chain stores selling electronic goods, office supply companies and even supermarkets and large department stores. Promotion opportunities, depending on experience, are available with most of the larger employers.

### Computer Data Input Operator

Salaries are in the range of £12,500 - £14,500 a year, rising to £17,500 - £22,500. High earners can make around £24,000 a year.

Data input operators usually work 35-39 hours from Monday to Friday, and some work shifts. Full-time, part-time, temporary and flexible working arrangements may be available.

Employment throughout the UK is with commercial organisations, some public utilities and government departments.

### Computer HelpDesk Operator

Salaries for computer help desk operators vary depending on the size and type of company they work for, and the level of technical competence required for the job. Help desk operators earn in the range of £16,500 - £20,000 a year, rising to £24,500 - £29,000. Higher earners can make around £32,000 a year.

Salaries may include performance-related pay, profit share or company bonuses.

Computer help desk operators usually work a basic 35-hour week, Monday to Friday. Early starts, late finishes, weekend work and shift work may be required.

Employers throughout the UK include computer manufacturers, software suppliers and Internet service providers, as well as firms in industry and commerce, including banks, building societies and insurance companies, and those in the public sector; local and central government departments, the NHS and public utilities.

### Computer Service Technician

Salaries for computer service technicians vary depending on the size and type of company they work for. Trainees salary starts around £13,500. With experience, they may earn up to £27,000 a year. Highly experienced and qualified technicians or specialists can earn up to £40,000 a year. Computer service technicians usually work a 37-hour week, Monday to Friday. Late finishes, on-call and weekend work may be required from time to time.

Employers throughout the UK are firms in industry and commerce, including banks, building societies and insurance companies, and in the public sector with local and central government departments, the NHS and public utilities.

Working as a computer service technician can lead into a computer support services engineer post.

### Computer Games Designer

Computer games designers earn in the range of £21,500 - £27,000 a year, rising to £33,500 - £43,000. Higher earners can make around £52,000 a year.

Salaries may include performance-related pay, profit share or company bonuses.

Games designers usually work a basic 37-hour week, Monday to Friday. However, late finishes and weekend work may be required, especially as deadlines approach. Self-employed designers may work longer and more irregular hours.

The UK has a small but thriving computer games industry, and skilled personnel are much in demand. There are also good opportunities to work in France, the USA and Japan, where many more computer games companies are based.

Employers range from large firms involved in creating, publishing and marketing new games, to smaller software publishing houses that specialise in a particular range of games.

Vacancies are published in the national press and also in specialist magazines such as 'Edge', which has an online Internet recruitment service.

Some designers are employed on a short- or fixed-term contract basis

### **Computer Systems Analyst**

Salaries for computer systems analysts vary depending on the range of their responsibilities, and the size and type of company they work for. The pay rates given below are approximate.

Systems analysts earn in the range of £21,500 - £27,000 a year, rising to £33,500 - £43,000. Higher earners can make around £52,000 a year.

Salaries may include performance-related pay, profit share or company bonuses.

Systems analysts usually work 35-37 hours, Monday to Friday.

Jobs exist throughout the UK with employers in industry and commerce, including banks, building societies and insurance companies, and in the public sector with local and central government departments, the NHS and public utilities. Systems analysis is increasingly carried out on a short-term contract or consultancy basis. This can be undertaken through specialist IT recruitment agencies.

### **Internet Website Designer**

Website designers earn in the range of £16,000 - £19,000 a year, rising to £23,000 - £27,000. Higher earners make around £30,000 a year.

Website designers usually work 35-37 hours, Monday to Friday, though some late finishes may be required as deadlines approach.

Opportunities occur with employers in every area of industry and commerce, including retail and broadcasting industries and charity organisations, and in the public sector, in local and central government.

Other opportunities are with advertising agencies, and specialist website design agencies. Some designers work independently on a freelance basis. Opportunities are increasing as more and more organisations realise the marketing potential of the Internet.

Consultancy and fixed-term contract work can be available for experienced web designers, including through specialist IT recruitment agencies.

### **Apprenticeships/National Vocational Qualifications/Work based Learning. Apprenticeships/Advanced Apprenticeships – Employer Led**

Locally there are few opportunities available in this area of work via this route. Competition is fierce and GCSEs in English and Mathematics (mostly grades A-C) are required.

### **Apprenticeships/Advanced Apprenticeships – Employer Led**

Some employers will employ young people on an apprenticeship programme, however this is a competitive area. Apprenticeships (NVQ Level 2) is the starting point for most young people. Achievement of Level 2 enables progression to Advanced Apprenticeships (Level 3). Apprenticeships are 'Employer Led' and therefore the trainee is employed and will be paid a wage. Apprenticeships last between 2-3 years depending on the person's progress.

### **Apprenticeships – Programme Led**

Sometimes 'Employer Led' apprenticeships are not immediately available therefore it may be possible to start training in an off-the-job setting where the person will undertake job

skills and training prior to moving onto employment and an Employer Led Apprenticeship.

**For further information look in the Apprenticeships Handbook, and ask your Personal Adviser for details of vacancies and how to apply.**

### **Full Time Education:**

4 - 5 GCSEs at grade A - C or the equivalent are required in order to study at Advanced level.

There are several types of course available to young people who have completed GCSEs, and have an interest in:

#### **1. A2 Levels**

These are offered at schools and colleges. If you wish to study a specialized Computing course at university it is usually necessary to do a related course before studying at university. A minimum of 2 (usually 3) A2 levels is required for university entrance.

#### **2. BTEC National Diploma for IT Practitioners**

These are all 2-year courses and equivalent to A Level but are more specialized. Many people will pursue the subject of their BTEC National Diploma at university. Progress from this type of course directly into higher education is common.

Many people who take 'A' levels go on to higher education. For degree entry the minimum requirement is two 'A2' levels (or their equivalent), although three are often required.

Mathematics is a good choice of subject for a degree in computer science (along with others). Those interested in the hardware aspect of computers should also consider physics as well. There are specialist courses for computer science, Internet computing and computer software design. Vocational qualifications can also be used to progress to higher education (degrees & foundation degrees).

## Computing Course Information

Course	Where?	How Long?	Entry Requirements
<b>Diploma in Digital Applications (DIDA) for IT Users (EDXCEL)</b>	East Riding College: Bridlington	1 year	2 GCSEs at grade D or above. Satisfactory College interview and references. A keen interest in ICT and multimedia. A willingness to work hard.
<b>National Certificate for IT Practitioners BTEC (ICT Systems Support)</b>	East Riding College: Beverley & Bridlington	2 years	4 GCSEs at grades A-C, including Maths and English. Satisfactory College interview.
<b>BTEC National Certificate for IT Practitioners: (Software Development)</b>	East Riding College: Beverley & Bridlington	2 years	4 GCSEs at grades A-C, including Maths and English. Satisfactory College interview.
<b>City &amp; Guilds Levels 1, 2 &amp; 3 ITQ Qualifications</b>	East Riding College: Beverley & Bridlington	1 year	Level 1: Students will need a good general education and will need to attend an initial interview. Level 2 & 3: Students will need to have recent and relevant IT experience.
<b>National Award/Certificate in ICT</b>	Franklin College	1 year	4 GCSEs at grade D (some grade C passes are preferable)
<b>Advanced Diploma in Information Technology</b>	Franklin College	2 years	5 GCSEs Grades A*-C minimum to include English Language.
<b>Level 1 Introductory Diploma IT @ Work</b>	Goole College	1 year	An Entry Certificate in Life Skills.
<b>EDEXCEL BTEC National Award/Certificate/Diploma for IT Practitioners</b>	Goole College	1 year	4 GCSEs at grade C.
<b>Level 1 – Diploma in Digital Appliances (DIDA)</b>	Grimsby Institute	1 year	Vocational Skills Award or Studies at GCSE Level and subject to Course Tutor's Interview.  Students are encouraged to improve their GCSE grade in English and Mathematics.

<b>Course</b>	<b>Where?</b>	<b>How Long?</b>	<b>Entry Requirements</b>
<b>National Certificate - Information Technology</b>	Grimsby Institute	1 year	4 GCSE's at Grade D, including Maths and English.
<b>National Award - /Certificate for IT Practitioners (IT and Business)</b>	Grimsby Institute	Full Time (15 hours class contact for Award/Certificate). A further 10 hours of personal study time is generally required.  BTEC National Certificate is normally studied over two years.	4 GCSE passes (or equivalent) at grade C or above which must include English and Mathematics or GNVQ Intermediate Information Technology Award at Merit together with English and Mathematics grade C or above.  A high level of commitment to studying for this 2 year period.
<b>BTEC National Certificate for IT Practitioners</b>	Grimsby Institute	2 years	4 GCSE grades or above including English and Maths.
<b>14-19 Diploma - Information Technology</b>	Grimsby Institute	1 year	Contact Institute
<b>Foundation Diploma in Information Technology – Level 1</b>	Hull College	1 year	4 GCSEs at grades E-F, including at least two Es. A satisfactory reference may be required.
<b>BTEC First Diploma in ICT Practitioners</b>	Hull College	1 year	4 GCSEs at grade D, including Maths & English. A satisfactory reference may also be required.
<b>BTEC National Diploma in IT Practitioners (IT and Business)</b>	Hull College	2 years	4 GCSEs at grade C and some IT skills, including Maths & English. A satisfactory reference may also be required.
<b>Advanced Diploma in IT</b>	Hull College	2 years	4 GCSEs at grade C and some IT skills, including Maths & English. A satisfactory reference may also be required.

<b>Course</b>	<b>Where?</b>	<b>How Long?</b>	<b>Entry Requirements</b>
<b>I-Pro Networking</b>	Hull College	1 year	4 GCSEs, which must include English and Science plus English Language or others at grades C. A satisfactory reference may also be required.
<b>BTEC Diploma in Business Administration and IT - Level 2</b>	Hull College	1 year	3 GCSEs at grade D, including English. Candidates also need motivation to succeed and a genuine interest in business. A satisfactory reference may also be required.
<b>BTEC National Certificate in IT Practitioners (System Support)</b>	John Legott College	2 years	GCSE grade C in Maths or English.
<b>BTEC First Certificate in Information and Communication Technology</b>	John Legott College	1 year	GCSE grades C in Maths or English.
<b>BTEC First Diploma for ICT Practitioners</b>	North Lindsey College	1 year	4 GCSEs grade E or above including Maths and English.
<b>BTEC National Award / Certificate / Diploma IT Practitioners</b>	North Lindsey College	2 years	4 GCSEs grade C.
<b>Diploma ICT System Support Level 2</b>	North Lindsey College	1 year	Candidates will typically have GCSEs in Maths and English at grade D.
<b>Level 1 Certificate / Diploma for Computer Maintenance</b>	North Lindsey College	1 year	Candidates will typically have GCSEs in Maths and English at Grade E or above (or equivalent).
<b>Level 3 Cert for IT Practitioners (ICT Systems Support) Computer Networking &amp; Support</b>	North Lindsey College	1 year	School leavers will need GCSE Grade B or above in English Language, Maths and Computer Science (ICT).
<b>OCR Level 2 Certificate for IT Practitioners (ICT Systems Support) Computer Maintenance</b>	North Lindsey College	1 year	Candidates will typically have GCSEs in Maths and English at Grade D or above (or equivalent). Successful completion of a Certificate in Information Technology would be an advantage.

Course	Where?	How Long?	Entry Requirements
<b>OCR National Certificate in Business &amp; ICT Level 1</b>	North Lindsey College	1 year	The entry requirements for this course are two GCSE's at Grade F, although other candidates may be considered on merit, subject to an interview.
<b>The New Diploma IT Advanced – Level 3 Diploma</b>	Wilberforce College	2 years	4 GCSEs at grade C (in at least 3 subjects)
<b>BTEC National for IT Practitioners</b>	Wilberforce College	1 year	4 C grades at GCSE level
<b>BTEC Introductory in IT at Work</b>	Wilberforce College	1 year	E, F and G grades at GCSE Level
<b>BTEC First Diploma in IT Practitioners</b>	Wilberforce College	1 year	D, E grades at GCSE Level
<b>BTEC National Diploma in ICT</b>	Woldgate College	1 year	Check with college
<b>BTEC First Diploma for ICT Practitioners</b>	Wyke College	1 year	4 D's at GCSE
<b>BTEC National for ICT Practitioners</b>	Wyke College	2 years	5 GCSEs including English & Maths grade C. Interested in the technical areas of Computing, e.g. programming and networking
<b>Diploma in Digital Applications for IT Users (DIDA) Level 1 Foundation</b>	York College	1 year	One of the following: Entry Certificate in Skills for Working Life, Life Skills or another Entry Level qualification. An appropriate standard of literacy and numeracy. Related interests and experiences.
<b>BTEC Introductory Diploma IT at Work</b>	York College	1 year	One of the following: Entry Certificate in Skills for Working Life or Life Skills or another Entry Level qualification. An appropriate standard of literacy and numeracy. Related interests and experiences.

Course	Where?	How Long?	Entry Requirements
<p><b>Information Technology Diploma</b></p> <p>The Foundation Diploma is a Level 1 qualification. It is equivalent to 5 GCSE grades D-G.</p> <p>2. The Higher Diploma is a Level 2 qualification. It is equivalent to 7 GCSE grades A*-C.</p> <p>3. The Advanced Diploma, aimed at those over 16, is a Level 3 qualification. It is equivalent to 3.5 A Levels.</p>	York College	<p>Level 1: 1 year</p> <p>Level 2: 1 year</p> <p>Level 3: 2 years</p>	<p>Foundation Level Level 1: an Entry Certificate in Skills for Working Life, Life Skills or another Entry Level qualification. An appropriate standard of literacy and numeracy. Students should have a real interest in the three sectors covered.</p> <p>Higher Level – Level2: 3 D grades or higher at GCSE. Foundation/Level 1 course. Potential students must also be able to demonstrate a genuine interest in the seven sectors covered by the diploma</p> <p>Advanced Level – 4 GCSEs at grade A*-C or higher.</p>
<b>National Certificate IT Practitioners (IT &amp; Business)</b>	York College	1 year	4 GCSEs at grade C Subject to references
<b>National Diploma IT Practitioners (IT &amp; Business)</b>	York College	2 years	4 GCSEs at grade C Subject to references
<b>National Certificate IT Practitioners (Software Development)</b>	York College	1 year	4 GCSEs at grade C Subject to references
<b>National Diploma IT Practitioners (Software Development)</b>	York College	2 years	4 GCSEs at grade C Subject to references
<b>ICT Practitioners (User, System Support) Level 2 BTEC First Diploma for ICT Practitioners</b>	York College		Contact college
<b>OCR Certificate/Diploma for IT Users</b>	York College		Contact college
<b>BTEC First Diploma in ICT</b>	Yorkshire Coast College	1 year	GCSEs up to grade C plus a positive attitude towards learning.
<b>BTEC Nationals for IT Practitioners</b>	Yorkshire Coast College	2 years	You will need 4 GCSEs at grade C or above as well as a positive attitude toward learning and an interest in ICT.

**For information on any of the above courses and to make an online application go to either:**

**East Riding & Hull Prospectus:  
[www.logonmoveon.co.uk](http://www.logonmoveon.co.uk)**

**North Lincolnshire and North East Lincolnshire Prospectus:  
[www.lincs2.co.uk](http://www.lincs2.co.uk)**

**Before making any final decision or if you need help to understand this leaflet, discuss all the options with your Personal Adviser.**

## Useful Addresses

### British Computer Society

1st Floor  
Block D  
North Star House  
North Star Avenue  
Swindon  
Wiltshire  
SN2 1FA

☎ 01793 417 417

🌐 [www.bcs.org.uk](http://www.bcs.org.uk)

### e-skills UK (Sector Skills Council for IT)

1 Castle Lane  
London  
SW1E 6DR

☎ 0207 963 8920

🌐 [www.e-skills.com](http://www.e-skills.com)

### Institute for the Management of Information Systems

5 Kingfisher House  
New Mill Road  
Orpington  
Kent  
BR5 3QG

☎ 0700 00 23 456

🌐 [www.imis.org.uk](http://www.imis.org.uk)

### Intellect

Russell Square House  
10-12 Russell Square  
London  
WC1B 5EE

☎ 020 7331 2000

🌐 [www.intellectuk.org](http://www.intellectuk.org)

### Help Desk Institute

21 High Street  
Green Street Green  
Orpington  
Kent  
BR6 6BG

☎ 0168 9889 100

🌐 [www.hdi-europe.com](http://www.hdi-europe.com)

### National Computing Centre

Oxford House  
Oxford Road  
Manchester  
M1 7ED

☎ 0161 242 2121

🌐 [www.ncc.co.uk](http://www.ncc.co.uk)

For further information look in your Connexions library under classification

## 'Computers and IT'



## Connexions Centre Addresses

### Beverley Connexions Centre

3 North Bar Within  
Beverley  
HU17 8AP

 01482 862741

### Bransholme Connexions Centre

76 Goodhart Road  
North Point Shopping Centre  
Bransholme  
Hull  
HU7 4EF

 01482 835780

### Bridlington Connexions Centre

20 Blenheim Road  
Bridlington  
YO16 4LD

 01262 678943

### Goole Connexions Centre

71-73 Boothferry Road  
Goole  
DN14 6BB

 01405 608810

### Grimsby Connexions Centre

Queen Street  
Grimsby  
DN31 1JA


 01472 355303

### Hessle Connexions Centre

1st Floor  
Library Building  
Southgate  
Hessle  
HU13 0SN

 01482 647127

### Holderness Connexions Centre

To make an appointment to be seen in Hedon, Hornsea or Withernsea please call Beverley Connexions on  01482 862741 or your local Customer Service Centre.

### Hull Connexions Centre

84-86 Paragon Street  
Hull  
HU1 3QA

 01482 223081

### Pocklington Connexions Centre

Pocklington Youth Centre  
25 New Street  
Pocklington  
YO42 2QA

 07824 486538

### Scunthorpe Connexions Centre

60 Oswald Road  
Scunthorpe  
DN15 7PQ

 01724 282200

[www.connexions-humber.co.uk](http://www.connexions-humber.co.uk)

[info@connexionshumber.co.uk](mailto:info@connexionshumber.co.uk)

[www.connexions-direct.com](http://www.connexions-direct.com)

**Freephone Connexions Direct**  
**080 800 13 2 19**

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