

Computing, IT & E-Learning



Web: www.barnfield.ac.uk/computing



Foundation Degrees also available in these subjects – see pages 106 to 113.





Martin Watts, BTEC First Diploma in software and hardware support, has cerebral palsy. "Barnfield College has been very supportive. It is really good. I previously studied electronic engineering at another college but the attitude was not helpful and I fell behind. I have learnt more this year than in the past two years. There are no stairs at the Technology Campus and facilities are pretty good, I have a special needs teacher and one-to-one support with Mathematics and English."

Computing, IT and E-learning is a diverse and fascinating industry to work in and it offers a variety of career opportunities.

System support, hardware and software systems, web, communications... the list is endless. So many of us are now reliant on IT and technology is always developing, so this is a great sector to consider when looking at your career options.

Based on our Technology Campus at Enterprise Way you will have access to state-of-the-art IT suites and work across a range of programming languages. Many of our courses are employer-endorsed providing excellent access to the world of work.



Please see our entry on page 17 regarding Barnfield Apprenticeships in this area.

Barnfield tutors are some of the best in the world – it's official.

In September 2009 a Barnfield student won a Medallion for Excellence in the WorldSkills competition in Calgary, Canada.

Hugo Landau, a network student at the College, represented Britain in the ICT Network Support competition. The 19-year-old achieved Britain's highest score ever in this section and he received the highest point score of any of the British medallion winners.

There are a range of job opportunities within this sector including:

- Information security architect
- IT help-desk manager programmer
- IT trainer
- Programmer
- Web developer
- Wireless networking specialists

Web: www.barnfield.ac.uk/computing



Adam Smith, Foundation Degree in Computer Networking. "I started off as a Level 3 student straight from school and was so impressed with the college that I progressed to the Foundation Degree. Barnfield is a fantastic place to learn with great facilities and support."

Computing, IT & E-Learning

Diplomas

01

Foundation Level Information Technology Diploma in IT

Content:

The Diploma in Information Technology is an exciting qualification that will challenge and stretch students preparing for further education or employment. It teaches IT in business.

Units include:

- Technology in organisations
- Impact of technology
- Working with people
- Network systems
- Database systems
- Multimedia
- Functional English, Mathematics, ICT and a specialism in computer maintenance

This diploma is equivalent to 5 GCSEs grades D–G.

Entry requirements:

Minimum GCSEs grade F in English and Mathematics and satisfactory school report/references. Students must have a keen interest in working in the IT industry.

Prospects / leads to:

BTEC First Diploma in ICT.

Additional info:

Course code: TAF1-ITD110
Duration: 1 year

03

Advanced Level Information Technology Diploma

Content:

This course is designed for learners wanting to acquire knowledge and develop skills within the broad context of the IT and telecommunications sector. The employer-endorsed content is up-to-date and relevant, reflecting the blend of business, technical, interpersonal and project skills needed for a career in the IT and telecoms sector.

It covers topics such as:

- Technology systems used in business
- Impact of technology on organisations, individuals and society
- Design and build small-scale technology systems including databases and networks
- Acquire knowledge and skills to create effective multimedia products
- How to manage and deliver successful IT projects
- Teamwork, communication and problem-solving skills

This diploma is equivalent to 3.5 A levels.

Entry requirements:

Minimum of six GCSEs at grade C which must include English and Mathematics or a Level 2 vocational IT qualification equivalent to four GCSEs plus Level 2 Key Skills in Communications and Numeracy or progression from a Level 2 Diploma in IT.

Prospects / leads to:

University degree or employment.

Additional info:

Access to a computer outside of college is useful but not essential
Course code: TAF1-IDL310
Duration: 2 years
Full Level 3

01

Certificate in ICT and Digital Applications Level 1 Diploma in Digital Applications (EDEXCEL)

Content:

This course will help students increase their skills and confidence in a range of areas including word processing, spreadsheets, databases, graphics, web design and computer maintenance.

Units covered include:

- Using ICT
- Word processing
- Spreadsheets and databases
- Presentation software
- Graphics artwork and imaging
- Website software
- IT maintenance for users
- Functional English, Mathematics and ICT
- Managing own money
- Preparation for work

Entry requirements:

There are no formal entry requirements for this course. However, students must have a keen interest in working with and using computers and have the potential and commitment to achieve.

Prospects / leads to:

BTEC First Diploma in ICT.

Additional info:

Access to a computer outside of college is useful but not essential
Course code: TAF1-IDL110
Duration: 1 year



Systems Support – ICT Practitioners

02

Software and Hardware Systems Support – ICT Practitioners

BTEC First Diploma ICT Practitioners (EDEXCEL)

Content:

This course is made up of six modules including:

- Presenting Information: Using text-based graphics and presentation tools
- Introduction to Computer Systems: Using hardware, software and computer functionality
- Website Development: Using web authoring software.
- Spreadsheet Software: Using Excel
- Database Software: Developing databases with forms and reports
- Installing and upgrading hardware and software

Entry requirements:

GCSEs grade D or equivalent Level 1 qualification in English and Mathematics.

Prospects / leads to:

BTEC National Certificate/Diploma in ICT, modern apprenticeships or employment.

Additional info:

Access to a computer outside of college is useful but not essential
 Course code: TAF1-FD1202
 Duration: 1 year
 Full Level 2

03

BTEC IT Practitioners National Award, Certificate & Diploma

Content:

The qualification will provide the essential knowledge, understanding and skills to progress into a number of specific areas of work which incorporate the use of ICT, and move on to a more responsible job if already in employment. The BTEC National Diploma for IT Practitioners is extended from the BTEC National Award and Certificate by providing more in-depth knowledge of a wider variety of areas in the IT field. There are six compulsory core units plus a further 12 units from specialist areas. Your first year of study includes nine units common to all routes and in the second year specific chosen specialist pathways include the remaining units in networking, systems support, web design, software development and games design.

Entry requirements:

A broad education including, for example, a BTEC First for ICT Practitioners and/or four GCSEs (grade C or above), the interest and potential to achieve the qualification.

Prospects / leads to:

With the international recognition of BTEC courses, you can progress straight into employment. There are a wide variety of potential careers within sectors such as the growing computer games industry, product development, technical support, technical sales, telecommunications and hardware engineering. Jobs commonly taken after completion of the qualification are systems analyst, technical support person and network manager. Further vocational and academic qualifications: three GCE A Levels. Progress further into higher education as BTEC National qualifications give UCAS points for university applications.

Additional info:

Access to a computer outside of college is useful but not essential
 Course code: TAF1-BTAW10
 Duration: 2 years

03

ICT Practitioners (Networking Pathway) National Diploma

Content:

This course covers:

- Communication and employability skills
- Communication technologies
- Information systems
- Computer systems
- Network management
- Principles of computer networks
- Specialist units:
 - Organisational systems security
 - Principles of software design and development
 - Data analysis and design
 - Computer architecture
 - Website production and management
 - Installing and upgrading software
 - Digital graphics and computers/computer animation
 - Networking fundamentals (Cisco CCNA1 Exploration)
 - Routers, protocols and concepts (Cisco CCNA2 Exploration)
 - LAN switching and wireless (Cisco CCNA3 Exploration)
 - Accessing the WAN (Cisco CCNA4 Exploration)
 - IBM System iOperator

All modules are assessed by assignments. Units are subject to change.

Entry requirements:

Minimum of four GCSEs grade C including English and Mathematics or a Merit in BTEC First Diploma in an appropriate technical discipline.

Prospects / leads to:

HND/degree programmes or employment.

Additional info:

Access to a computer outside of college is useful but not essential
 Course code: TAF1-NET610
 Duration: 2 years
 Full Level 3

Computing, IT & E-Learning

Systems Support – ICT Practitioners

03

ICT Practitioners (Web and Software Pathway) National Diploma

Content:

This course covers:

- Communication and employability skills
- Information systems
- IT systems analysis and design
- Principles of software design and development
- Event-driven programming
- Computer systems specialist units
- Data analysis and design
- Organisational systems security
- Website production and management
- Installing and upgrading software
- Digital graphics and computers/ computer animation
- Object-oriented programming
- Web server scripting
- IT project
- Client-side customisation of web pages
- e-Commerce
- Networking fundamentals

All modules are assessed by assignments. Units are subject to change.

Entry requirements:

Minimum of four GCSEs grade C including English and Mathematics or a Merit in BTEC First Diploma in an appropriate technical discipline.

Prospects / leads to:

HND/degree programmes or employment.

Additional info:

Access to a computer outside of college is useful but not essential

Course code: TAF1-PRO610

Duration: 2 years

Full Level 3

03

ICT Practitioners (Computer Games Design Pathway) National Diploma

Content:

This course covers:

- Communication and employability skills
- Information systems
- IT systems analysis and design
- Principles of software design and development
- Event-driven programming
- Computer systems specialist units
- Data analysis and design
- Computer animation (using Flash)
- Developing computer games
- Graphics and graphic design (using Fireworks and Photoshop)
- Website production and management (using Dreamweaver)
- Client side customisation of web pages
- Principles of computer networks
- Object-oriented programming
- Advanced database skills
- IT project

All modules are assessed by assignments. Units are subject to change.

Entry requirements:

Minimum of four GCSEs grade C including English and Mathematics or a Merit in BTEC First Diploma in an appropriate technical discipline.

Prospects / leads to:

HND/degree programmes or employment.

Additional info:

Access to a computer outside of college is useful but not essential

Course code: TAF1-GAME10

Duration: 2 years

Full Level 3

Technology

E

In 2 Technology Certificate in Technology Based Skills

Content:

The In 2 Technology course will help students increase their skills and confidence in English, Mathematics, ICT and practical subjects. It includes vocational classes in Construction (painting & decorating) and Engineering (motor vehicle maintenance). In 2 Technology offers students the option to move on to a Computing, Construction or Engineering pathway.

Units include:

- English
- Mathematics
- ICT
- Managing own Money
- Preparation for Work
- Personal and Social Development
- Painting and Decorating
- Motor Vehicle Maintenance

This course is assessed using a variety of methods including a folder of evidence, practical tasks, assessments and some exams.

Entry requirements:

There are no formal entry requirements for students undertaking this course. However, students should have a good school report (if applicable) and commitment to achieve.

Prospects / leads to:

Higher study levels such as Progression Awards Levels 1, 2 & 3 in ICT, Construction or Engineering.

Additional info:

Access to a computer outside of college is useful but not essential

Course code: TAF1-PRF212

Duration: 1 year



02

iTO NVQ for IT Users City & Guilds e-quals; Employment using Information Technology

Content:

This course covers a wide range of areas including:

- IT principles
- Using the Internet
- Using e-mail
- Word processing
- Spreadsheets
- Presentation graphics

Entry requirements:

GCSEs grade D or equivalent Level 1 qualification in English and Mathematics. An interest in using computers. Prior completion of iTO NVQ for IT Users Level 1.

Prospects / leads to:

Level 3 iTO NVQ for IT Users City & Guilds e-quals; Employment using Information Technology.

Additional info:

Access to a computer outside of college is useful but not essential

Course code: TAF1-ITQF10

Duration: 1 year

Full Level 2

