SUBJECT LISTED:

- Computer Science [AS]
- IT [BTEC L3]
- IT [BTEC L3]
- IT [BTEC L2]
- IT [BTEC L2]
Computer Science
[AS]
What are the main features of this course?

Demanding both logical discipline and creativity in the design of algorithms and the writing, testing and debugging of programmes. Relying on an understanding of the fundamental rules of language, it encourages an awareness of the management and organisation of computer systems.

- Understanding and applying the fundamental concepts of computer science; abstraction, decomposition, logic, algorithms and data representation
- Analysing problems in computational terms through practical experience of solving such problems and writing programs
- Thinking creatively, innovatively, analytically, logically and critically
- Understanding relationships between different aspects of computer science
- Mathematical skills
- The individual (moral), social (ethical), legal and cultural opportunities and risks of digital technology

Hours of lessons per week: 5
Indicative group size: 25
How is the course assessed?

Component 1: Fundamentals of Computer Science
Written examination 70% 2hrs exam

Component 2: Practical Programming to Solve Problems
On-screen examination 30% 2.15hrs

Where can I go next?

The majority of A-level students go on to Higher Education to study a wide variety of subjects at university.

Jobs like being a scientist, a computer programmer or a medical scientist could be an option after completing a BSC Honors degree or a Modern Apprenticeship. This course extends horizons beyond the college environment in the appreciation of the effects of computer science on society and individuals.

Need More Information? Contact:
Barbara Tomlinson
Head of IT & Computing
btomlinson@jcc.ac.uk
This course provides learners with the fundamental knowledge and skills in Computing. There are two units which include:

**Component 1: Fundamentals of Computer Science**
Written examination: **2 hours**
70% of qualification

This component investigates computer architecture, communication, data representation, data structures, software applications, programs, algorithms, logic, programming methodologies and the impact of computer science on society.

**Component 2: Practical Programming to Solve Problems**
On-screen examination: **2 hours 15 minutes**.
30% of qualification

This component consists of a series of set tasks completed on-screen by candidates. These tasks will assess the practical application of knowledge and understanding and will require the use of Visual Basic.NET, Python or Java as a programming language.

This qualification carries UCAS points and is recognized by Higher Education providers as meeting admission requirements to many relevant courses.

New Students’ Day 2020
Joseph Chamberlain College
SUMMER CHALLENGE

Create a PowerPoint which explains components that are required in a computer system. An example of a component is Central Processing Unit. You must provide a detailed paragraph for each component with an image of the component. Your paragraph should include a description of the component and its function within a computer system. Your presentation must include at least 5 components.

HINTS & TIPS

What materials and equipment should I buy for September?
For September you need to purchase; a folder to keep all of the hand-outs in that will be given to you, a set of pens and pencils for creating designs with and a USB for saving your work onto. It is recommended that you also create either a Drop Box or Google drive account to use as a backup for saving your work.

What should I read over the summer?
Over the summer you should read the content on the following topics.
• Computer Components

What websites will help me?
The following websites will help you with the summer task:
http://study.com/academy/lesson/computer-system-components-computer-parts-functions.html
IT [BTEC L3]
BTEC Level 3 National Extended Certificate

What are the main features of this course?

The Level 3 Extended Certificate is a two year course that provides learners with the opportunity to develop their knowledge and skills is the relationship between hardware and software that form an IT system, managing and processing data to support business and using IT to communicate and share information.

Successful completion of the two-year course carries the same number of UCAS points as 1 A Level.

Hours of lessons per week: 5

Indicative group size: 20

How is the course assessed?

The two year course is comprised of four units of which one is assessed through an exam, one through externally set and marked tasks and two through internally set and marked assignments.

There are three mandatory units and one optional unit: Information Technology Systems, Creating Systems to Manage Information and Using Social Media in Business, including Website Development as an optional unit.

Where can I go next?

Students can progress onto higher level studies at university in a range of non-IT based subject areas depending on the other subjects studied alongside the Extended Certificate.

Need More Information? Contact:

Barbara Tomlinson
(Head of IT & Computing)
btomlinson@jcc.ac.uk
BTEC LEVEL 3 EXTENDED CERTIFICATE IN IT

SUBJECT OVERVIEW

This course provides learners with the fundamental knowledge and skills in Computing.

There are three mandatory units and one optional unit: Information Technology Systems, Creating Systems to Manage Information, Using Social Media in Business and Website Development.

This qualification carries UCAS points and is recognised by Higher Education providers as meeting admission requirements to many relevant courses.

New Students’ Day 2020
Joseph Chamberlain College
SUMMER CHALLENGE

Create a PowerPoint which explains “good and poorly designed websites. An example of a website design that is good and an example of a website design that is poor. You must provide a detailed paragraph for each design with an image of the website/features. Your paragraph should include a description of the features and qualities you deem to be good or poor to support your explanations.

HINTS & TIPS

What materials and equipment should I buy for September?
For September you need to purchase; a folder to keep all of the hand-outs in that will be given to you, a set of pens and pencils for creating designs with and a USB for saving your work onto. It is recommended that you also create either a Drop Box or Google drive account to use as a backup for saving your work.

What should I read over the summer?
Over the summer you should read the content on the following topics.
• Principles of Website Development

What websites will help me?
The following websites will help you with the summer task: http://www.webpagesthatsuck.com/
What are the main features of this course?

This course provides learners with the fundamental knowledge and skills in computing. There are 3 mandatory units and 15 optional units: Organisational Systems Security, Database Design, Procedural Programming, Software Design and Development, Digital Graphics, e-Commerce, Computer Animation, Website Development.

Successful completion of the two-year course carries the same number of UCAS points as 3 A Level.

Hours of lessons per week: 15

Indicative group size: 20

How is the course assessed?

The two year course is comprised of 18 units which are assessed through internally set and marked assignments. The grades achieved for each unit are combined to give an overall final grade.

Where can I go next?

This course will enable a choice of areas for further study such as BSc (Hons) Computer Systems and Networks, BSc (Hons) in Creative Digital Media, BSc (Hons) Business Information Systems or BSc (Hons) in Computer Science.

(*selected universities only)

Need More Information? Contact:
Barbara Tomlinson
(Head of IT & Computing)
Btomlinson@jcc.ac.uk
SUBJECT OVERVIEW

This course provides learners with the fundamental knowledge and skills in computing. There are three mandatory units and fifteen optional units: Information Systems, Computer Systems, Communication and Employability Skills in IT, Website Development, Database Design, Event Driven Programming, Software Design and Development, Computer Animation, Organisational Systems Security.

This qualification carries UCAS points and is recognised by Higher Education providers as meeting admission requirements to many relevant courses.
SUMMER CHALLENGE

Complete the following task over the summer:
Create a PowerPoint which explains components that are required in a computer system.

An example of a component is Central Processing Unit. You must provide a detailed paragraph for each component with an image of the component.

Your paragraph should include a description of the component and its function within a computer system. Your presentation must include at least 5 components.

HINTS & TIPS

Over the summer you should read the content on the following topic:

• Computer Components

http://study.com/academy/lesson/computer-system-components-computer-parts-functions.html

What are the main features of this course?

BTEC Level 2 First Award courses are equivalent to 1 GCSE each.

This is an exciting one year course to learn and develop industry relevant skills through a wide range of creative units, including the Online World, Website Development and Digital Portfolio.

Students will develop core knowledge around the theory of these unit areas, as well as practical skill sets. This is an excellent one year course for students who are interested in new technology and how it impacts our society.

Hours of lessons per week: 5

Indicative group size: 20

How is the course assessed?

One online exam and two coursework based assignments. There will be a range of assessments in class including written exams, practical and demonstrations of creating software.

Where can I go next?

This course is best suited to a student who has a keen interest in ICT and the latest developments in digital technology. As the course is very practical skills based, it will also appeal to students who want to develop key skills allowing them to create and maintain websites, as well as learning about new technology.

On completion of the course, students will be able to progress to a Level 3 BTEC ICT course or an IT apprenticeship role

Need More Information? Contact:

Barbara Tomlinson (Head of IT & Computing)
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This is an exciting course which provides students with the opportunity to learn and develop industry relevant skills through a wide range of creative units, including the Online World, Website Development and Digital Portfolio. Students will develop core knowledge around the theory of these unit areas, as well as practical skill sets which will allow students to either progress to a Level 3 BTEC ICT course or an IT apprenticeship role. This is an excellent one year course for students who are interested in new technology and how it impacts on society.

The course is assessed through one online exam and two coursework based assessments. It is a challenging one year full-time course, which requires a high level of commitment throughout the year to ensure success. There will be a range of assessments in class. These include written exams, practical tasks and demonstrations of creating software.

This course is best suited to a student who has a keen interest in ICT and the latest developments in digital technology.
SUMMER CHALLENGE

Create a PowerPoint or Prezi presentation which explains what ‘Cloud Computing’ is. Within the presentation you must include slides on the advantages and disadvantages of using Cloud Computing, as well as examples as to how and where it is being used.

HINTS & TIPS

For September you need to purchase; a folder to keep all of the hand-outs that will be given to you in, a set of pens and pencils for creating designs with and a USB for saving your work onto. It is recommended that you also create either a Drop Box or Google Drive account to use as a backup for saving your work.

Over the summer you should read the content on the following website links, so that you are prepared for the first two topics that you will study.
http://www.bbc.co.uk/education/guides/zbstsgk7/revision

The following website will help you with the summer task:
http://uk.pcmag.com/networking-communications-software-products/16824/feature/what-is-cloud-computing
IT [BTEC L2]
What are the main features of this course?

This is an exciting course which provides students with the opportunity to learn and develop industry relevant skills through a wide range of creative units, including: Computer Networks, Technology Systems, Database Development, Installing and Maintaining Software, Website Development and Creating Digital Graphics.

Students will develop core knowledge around the theory of these unit areas, as well as practical skill sets which will allow students to either progress to a Level 3 BTEC ICT course or an IT apprenticeship role.

Hours of lessons per week: 13

Indicative group size: 20

How is the course assessed?

The course is assessed by a mixture of assignments and exams. There are two units assessed by external examinations and six units assessed by assignments. The grades achieved in the assignments and exams are combined to give an overall final grade.

Where can I go next?

Successful completion of the course will allow students to progress onto the Level 3 National Extended Diploma in IT, provided that the appropriate grades in GCSE Maths and English are also achieved.
BTEC FIRST LEVEL 2 EXTENDED CERTIFICATE IN ICT

SUBJECT OVERVIEW

This is an exciting course which provides students with the opportunity to learn and develop industry relevant skills through a wide range of creative units, including: Computer Networks, Technology Systems, Database Development, Installing and Maintaining Software, Website Development and Creating Digital Graphics. Students will develop core knowledge and skills around the theory of these unit areas, which will allow students to either progress to a Level 3 BTEC ICT course or an IT apprenticeship role.

The course is assessed through two online exams and six coursework based assessments. It is a challenging one year full time course which requires a high level of commitment throughout the year to ensure success.

This course is best suited to a student who has a keen interest in ICT and the latest developments in digital technology.
SUMMER CHALLENGE

Create a PowerPoint or Prezi presentation which explains what 'Cloud Computing' is. Within the presentation you must include slides on the advantages and disadvantages of using Cloud Computing, as well as examples as to how and where it is being used.

HINTS & TIPS

For September you need to purchase; a folder to keep all of the hand-outs that will be given to you in, a set of pens and pencils for creating designs with and a USB for saving your work onto. It is recommended that you also create either a Drop Box or Google Drive account to use as a backup for saving your work.

Over the summer you should read the content on the following website links, so that you are prepared for the first two topics that you will study.
http://www.bbc.co.uk/education/guides/zbtsgk7/revision

The following website will help you with the summer task:
http://uk.pcmag.com/networking-communications-software-products/16824/feature/what-is-cloud-computing