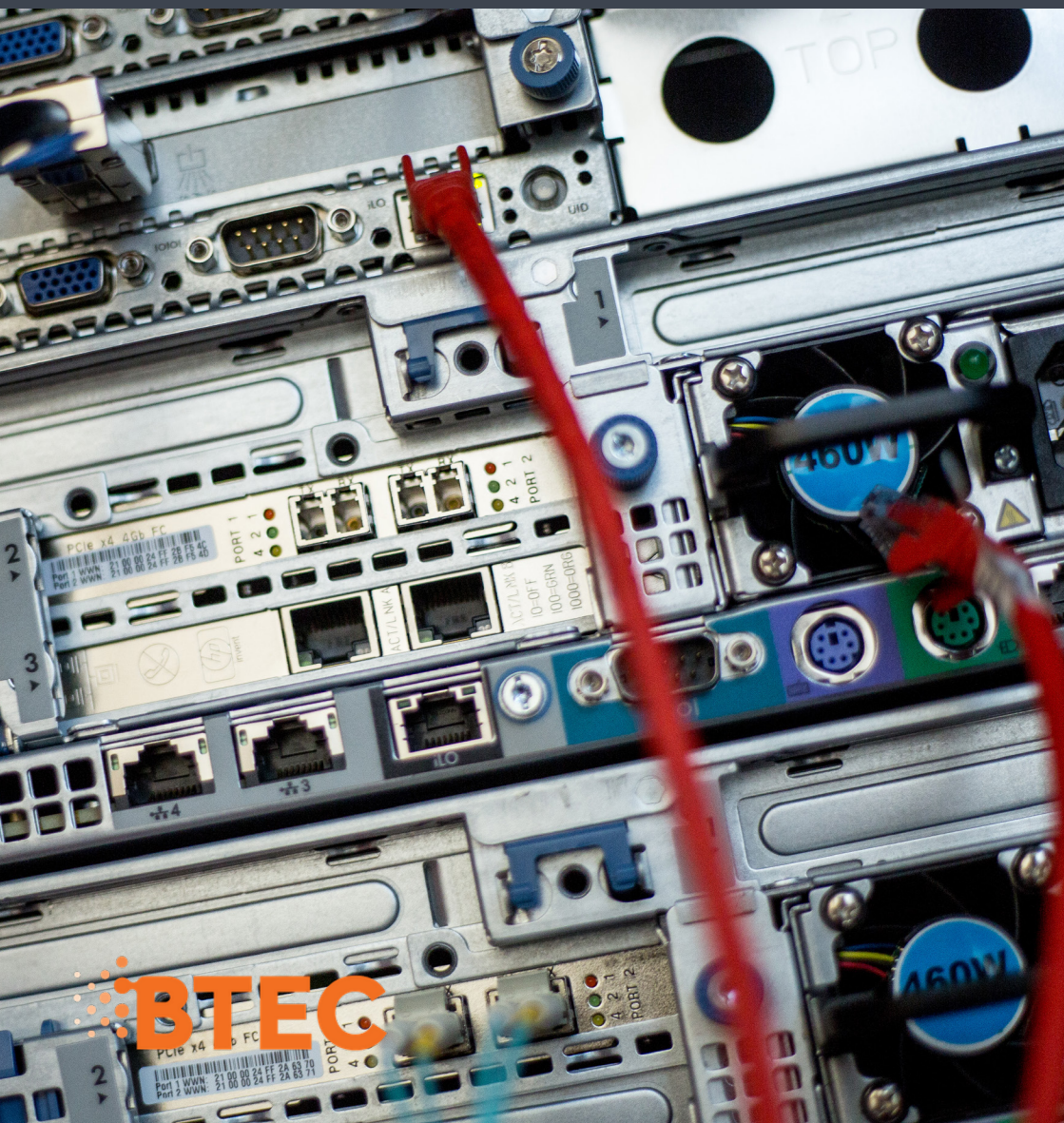


CRAVEN COLLEGE



# COMPUTING & IT

LEVEL 3 FOUNDATION/EXTENDED DIPLOMA



# OVERVIEW

The Level 3 Foundation and Extended Diploma in IT has been designed to provide students with the knowledge, skills and understanding of the industry necessary to progress to many University courses and job placements.

It provides an opportunity for those who have an interest in Computing to explore, develop and test their technical skills within a qualification structure that mimics the real world. The course covers topics that are stimulating, demanding and provides a supportive transition from general to more specialised study.

All units within the curriculum provide access to jobs in all areas of the IT industry, from Website Development to Data Analysis, Games Development to managing a complete IT project where the students will apply practical skills alongside theory based learning.



# COURSE DELIVERY & CURRICULUM

To achieve the Level 3 Extended Diploma in IT students need complete 13 units. The units are delivered through various projects which take place throughout the academic year.

In the year you will also take part in various workshops, educational visits and also Work Related Learning. This is a series of planned activities that uses the context of work to develop knowledge, skills and understanding useful in work, including learning through the experience of work, learning about work and working practices, and learning the skills for work.

## YEAR 1

Unit 1 | Information Technology Systems

Unit 2 | Database Development

Unit 3 | Social Media for Use in Business

Unit 4 | Programming

Unit 5 | Data Modelling

Unit 6 | Web Development

## YEAR 2

Unit 11 | Cyber Security and Incident Management

Unit 14 | IT Service Delivery

Unit 8 | Computer Games Development

Unit 9 | Project Management

Unit 12 | Technical Support and Management

Unit 19 | Internet of Things

Unit 20 | Enterprise in IT

# INFORMATION TECHNOLOGY SYSTEMS

Externally Assessed Unit

In this unit you will explore the relationship between hardware and software and how they work together. Looking at how the user interacts with this equipment. This unit gives you a fundamental understanding of all areas of IT.

# CREATING SYSTEMS TO MANAGE INFORMATION

Externally Assessed Unit

You will examine the structure of data and its origins, and how an efficient data design follows

through to an effective and useful database. You will examine a given scenario and develop an effective design solution to produce a database system. You will then test your solution to ensure that it works correctly. Finally, you will evaluate each stage of the development process and the effectiveness of your database solution.

# SOCIAL MEDIA FOR USE IN BUSINESS

Assessed in College

You will explore different social media websites, the ways in which they can be used and the potential pitfalls when using them

for business purposes. You will develop a plan to use social media strategies for business purposes to achieve specific aims and objectives. You will then implement the plan, developing and posting content and interacting with others. Finally, you will collect data on the business use of social media and review the effectiveness of your efforts.



## 1 - SEMESTER 2

### PROGRAMMING

Assessed in College

You will explore different social You will learn about computational thinking skills and the principles of designing and developing computer programs. You will

apply computational thinking skills to design, develop, test, refine and review computer programs for a given range of purposes. By developing your analytical, problem-solving and programming skills, this unit will help you to progress to higher education or to employment as a software developer.

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### DATA MODELLING

Assessed in College

In this unit, you will investigate the fundamentals of the decision-making process. You will find out how using data modelling provides the computational ability to compare consequences, and determine a preferred course of action. You will develop the

skills and techniques necessary to create complex spreadsheets in order to produce accurate information that informs decision making. You will examine a scenario and then design, develop and test a spreadsheet; you will review your spreadsheet and make refinements based on user feedback, providing an evaluation of the effectiveness of the alternatives produced.

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### WEB DEVELOPMENT

Assessed in College

In this unit, you will review existing websites – commenting on their overall design and effectiveness. You will use scripting

languages such as Hypertext Markup Language (HTML), Cascading Style Sheets (CSS) and JavaScript® and a simple text editor, or rapid application development tools. Finally, you will reflect on the website design and functionality using a testing and review process.

# CYBER SECURITY AND INCIDENT MANAGEMENT

### Externally Assessed Unit

In this unit, you will examine the many different types of cyber security attacks, the vulnerabilities that exist in networked systems and the techniques that can be used to defend an organisation's networked systems. You will investigate the techniques used to

assess risks and ways of planning to deal with the results of a cyber-security incident and recover systems following an incident. You will examine scenarios, carry out risk assessments and prepare protection plans before protecting networked systems. You will also examine evidence from cyber security incidents and relevant security documentation, using the evidence to make recommendations for improvement, data on the business use of social media and review the effectiveness of your efforts.

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# IT SERVICE DELIVERY

### Externally Assessed Unit

An IT service is any use or application of an IT system to support the aims and needs of the organisation. In this unit, you will apply understanding of IT systems and the IT service life cycle to explore the needs of organisations and the IT services that facilitate their success. You will learn how to interpret the needs and goals of organisations to define the IT services required and to analyse related requirements to explore

how information, data and IT systems (software and hardware) can be used to facilitate IT service delivery. You will explore a range of organisations and investigate their IT service needs, examining the computer systems that have been set up, used and integrated to deliver IT services to users and customers. You will examine issues related to the use of IT and the implications for organisations and their customers. You will analyse the IT services and requirements of organisations to plan the implementation of the IT service delivery solution

# COMPUTER GAMES DEVELOPMENT

Assessed in College

In this unit, you will investigate the technologies used in the computer gaming industry and the implications they have for users, developers and organisations.

You will analyse how user needs and preferences impact on game design and how target technologies affect the design and development of a computer game. Finally, you will design, create and review a computer game to meet requirements and reflect on the skills and understanding applied during the design and development process.

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# PROJECT MANAGEMENT

Assessed in College

In this unit, you will investigate the principles of project management and different project management methodologies, as used in the IT industry. You will deliver an IT project using at least one project management methodology and complete the five main stages of a project. You will initiate the project by researching a problem

and using your creative skills to generate a range of solutions, undertaking a feasibility study to select an appropriate solution and outline the requirements of the project. You will undertake the planning, execution, and monitoring and control stages of the project, either through simulation or by undertaking a major project as part of your BTEC course, which could involve the integration of several units. You will close the project by reflecting on the success of the project outcome and your personal performance.

# TECHNICAL SUPPORT & MANAGEMENT

Assessed in College

In this unit, you will examine the support and management needs and characteristics of IT systems used by organisations, identifying areas where support is necessary and the different job roles involved. You will examine the legislation and regulations that are in place to provide a

safe and productive environment for employees. You will carry out a series of practical IT support activities on a system and a range of devices, which could include performing software updates and changing user access rights. You will monitor system performance and optimise it to meet the client's requirements. You will learn about and apply appropriate behaviours to complete these activities. Finally, you will prepare a support and management plan for a new IT system.

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# INTERNET OF THINGS

Assessed in College

In this unit, you will investigate the applications of different IoT systems and services, including the principles involved and the characteristics of the systems and services. You will design a prototype IoT system or device and develop it using off-the-

shelf hardware and suitable programming languages, techniques and constructs. The analytical, problem-solving and practical skills you gain in this unit will prepare you for entry to higher education to study a range of degrees. The unit will help you when entering an IT apprenticeship or the workplace, for example as a junior software developer.



# ENTERPRISE IN IT

### Assessed in College

You will learn about enterprise by looking at the characteristics of entrepreneurs, the techniques they use and how these contribute to setting up and running an enterprise. Entrepreneurs have to drive through their ideas as there will be resources they need to gain and barriers to success they need to overcome, something that all entrepreneurs are accustomed to dealing with. You will examine whether you have the entrepreneurial skills to start up an IT enterprise. Once you have

identified a potential IT product or service, you will investigate whether customers want it and what features they do and don't like. You will do this by carrying out market research and creating a marketing plan to drive sales and generate the cash needed by an enterprise to survive. Start-up enterprises also need smart, lean plans as entrepreneurs have to focus primarily on product and service development. However, both you and your stakeholders have to be convinced of the realism and viability of your entrepreneurial idea so you will learn how to produce and present a start-up plan for your IT enterprise.



# WORK EXPERIENCE

As part of the course, you will take part in 37 hours of work based experience. This can be undertaken in any job that you wish, as long as it is focused on IT.

In the past our students have worked for companies such as:

- West Yorkshire Police  
(Cyber Security and Forensics)
- Skipton Building Society
- StepChange Debt Charity
- Hothfield Junior School
- Silsden Primary School
- Riddlesden Accountants
- Otley Courthouse
- University of Leeds
- Oxfam/BHF charities

## OTHER ACTIVITIES

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### PLACES THAT WE VISITED 2018/19:

- Bradford Media Museum  
(Level 1 & 2, Level 3 x 2 trips)
- London Science Museum
- HMS Belfast
- Leeds Trinity (Subject Focus Day)

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### PLACES WE WANT TO VISIT IN THE FUTURE:

- ESL One
- National Computing Museum

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### GUEST TALKS (ABOUT):

- Project Management (Industry Specialist)
- Cyber Security (Former Student now employed at Bradford Uni)
- Web Development (Industry Specialist)



# ENTRY REQUIREMENTS

## **Level 3 Foundation Diploma in IT (Year 1)**

- 5 GCSE's grade 5 or above including Maths & English

## **Level 3 Extended Diploma in IT (Year 2)**

- Level 3 Foundation Diploma in IT
- GCSE English & Maths Grade 5 or above

Level 3 Certificate and Extended Certificate are available on request.

# PROGRESSION ROUTES

Previous students from our Level 3 Extended Diploma have gone on to study at various institutions. Most go on to study Cyber Security and Cyber Forensics at University and all were accepted to their first choice course based on their results from Craven College:

- Chris Delee – University of Bradford
- Aaron Horner – Edinburgh Napier
- Thomas Harrison, Matthew Anderson, Jessica Wade, Ihtisham Anjum and Shahidur Rahman went to Leeds Beckett.





# Enriching lives through learning

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