

EDEXCEL / 2 YEARS

COMPUTING

EXTENDED CERTIFICATE

This qualification is designed to support students interested in learning about the computing sector alongside other fields of study, with a view to progressing to a wide range of higher education courses. It is designed to be taken as part of a programme of study that includes other appropriate BTEC Nationals or A-levels.

The course is made up of four units, with internal and external assessment as detailed below. The following three units are all compulsory and there is a further optional unit:

UNIT 1: PRINCIPLES OF COMPUTER SCIENCE (External 30%)

Written examination set and marked by Pearson. • 90 marks. • Two hours.

This mandatory unit requires students to apply learning from across the qualification to the completion of a defined vocational task. Students will draw together and apply their computational-thinking skills to effectively analyse a computing problem, break it down into its component parts, then design and evaluate solutions.

UNIT 2: FUNDAMENTALS OF COMPUTER SCIENCE (External 28%)

Written examination set and marked by Pearson. • 80 marks. • 1 hour and 45 minutes.

During the examination, students will be assessed on their knowledge and understanding of how computer systems work, including the role of hardware and software, the way components of a system work together and how data in a system is used.

UNIT 7: IT SYSTEMS SECURITY AND ENCRYPTION (Internal assessment 25%)

Students will study IT system security threats and the methods used to protect against them, and will undertake activities to protect IT systems from security threats, including data encryption. In this unit, students will investigate the many different types of security attack, the vulnerabilities that exist and techniques that can be used to defend the IT systems of organisations.

Other optional units include:

DIGITAL GRAPHICS AND ANIMATION

WEBSITE DEVELOPMENT

COMPUTER GAMES DEVELOPMENT

Students can also study the Computing BTEC Certificate. This one-year course consists of Units 2 and 7.