



Tudor Grange Academy Solihull

Year 8

CURRICULUM CHOICES

2019



GCSE
Computer Science (9-1)



WHAT YOU WILL STUDY

The course is comprised of 3 components:

Component 01 – Computer Systems

- The first component is focused on computer systems covering the physical elements of computer science and the associated theory.
- *Systems architecture • Memory • Storage • Wired and wireless networks • Network topologies and protocols • Network security • System software • Moral, social, legal, cultural and environmental concerns*



WHAT YOU WILL STUDY

Component 02 – Computational Thinking, Algorithms and Programming

- This component is focused on the core theory of computer science and the application of computer science principles.
- *Translators and facilities of languages • Algorithms • High- and low-level programming • Computational logic • Data representation*



WHAT YOU WILL STUDY

Component 03 – Programming Project

- In this component candidates are challenged by a range of exciting and engaging tasks, in order to apply the knowledge and skills they have learned.
- *Programming techniques • Design • Development • Effectiveness and efficiency • Technical understanding • Testing, evaluation and conclusions*
- **Please note only a small element of this course includes actual programming**



HOW WILL I BE

Component 01 – Computer Systems

1 hour 30 minute written examination (80 marks)

Worth 50% of the GCSE

Component 02 – Computational Thinking, Algorithms and Programming

1 hour 30 minute written examination (80 marks)

Worth 50% of the GCSE

Component 03 – Programming Project

Students are required to complete a practical programming task which is externally moderated.



SKILLS REQUIRED

This is a technical and challenging course ideal for students who are “computational thinkers”; that means those who enjoy problem solving and relish the challenge of solving complex mathematical problems, those who are clear logical thinkers, and certainly who have enjoyed and thrived in the programming units of work covered at key stage 3.

- ***The course is most suitable for students with a high mathematical ability***
- ***Companion subjects: Maths, Physics***
- ***Please note 100% of the course is assessed through written, non-computer-based examinations***
- ***It should not be confused with the IT qualification also on offer, which is only 25% examination (the remainder is practical work)***

LINKS TO CAREERS AND FUTURE



- We have been running the A level in Computer Science here at Solihull for the past four years
- The GCSE Computer Science course will equip students with the necessary skills, knowledge and understanding to enable them to pursue the subject at A level and beyond, with a view to following a career in Computing or Computer Science, bridging the gap in technical skills which is a significant issue in the industry currently.



IT

(OCR Creative iMedia)



WHAT YOU WILL STUDY

The **Cambridge Nationals in Creative iMedia** equips students with a range of creative media skills and provides opportunities to develop, in context, desirable, transferable skills such as research, planning, and review, working with others and communicating creative concepts effectively. Through the use of these skills, students ultimately create fit-for-purpose creative media products.

The course challenges all learners, by introducing them to demanding material and techniques; encouraging independence and creativity; and providing tasks that engage with the most taxing aspects of the National Curriculum.



WHAT YOU WILL STUDY

The OCR Level 2 Cambridge National Certificate in Creative iMedia consists of two mandatory units, and two other units chosen by the centre.

Unit R081 – Production skills (mandatory)

This unit enables students to understand skills used in the creative and digital media sector. It develops their understanding of the client brief, time frames, deadlines and preparation techniques that form part of the planning and creation process. On completion of this unit, students will be able to plan production of a creative digital media product to a client brief, and will understand how to review existing products.



WHAT YOU WILL STUDY

Unit R082 – Creating digital graphics (mandatory)

This unit builds on unit R081 and students are able to apply the skills, knowledge and understanding gained in that unit and vice versa. The aim of this unit is for learners to understand the basics of digital graphics editing for the creative and digital media sector. On completion of this unit, students will understand the purpose and properties of digital graphics, and know where and how they are used. They will be able to plan the creation of digital graphics, create new digital graphics using a range of editing techniques and review a completed graphic against a specific brief.

The two optional units are selected from a range of units covering 3D design; website authoring; animation; multimedia; sound and video.



SKILLS

Students complete a foundational project in Year 9 which prepares them for the qualification by enabling them to develop their graphic design and multimedia skills using the **Adobe Creative Suite**.

Students will explore different existing products and learn how to use software to design and create effective products for specified purposes and audiences.



HOW WILL I BE

- Each of the four units is worth 25% of the qualification.
- Unit R081 is assessed externally through a 1 hour 15 minute written examination.
- All other units are project-based and are assessed internally and moderated externally by the exam board.

LINKS TO CAREERS AND FUTURE



- This course is very relevant to the IT / media industry and relates specifically to the following careers:
- Graphic designer
- Web developer
- Multimedia author / content developer
- Media production