



**Berkeley  
Green  
UTC**

# Key Stage 4

## Qualification Descriptions

### Core Subjects

#### English

Students at the UTC will be completing two English qualifications: the Edexcel English Language GCSE and the Edexcel English Literature GCSE. Both qualifications will result in students achieving a grade 9-1 based on their performance in their final Y11 exams. The English curriculum will aim to develop the students' ability to be imaginative, be reflective and be critical. The sessions should ignite the students' imagination, should encourage reflection and, should develop the students' ability to think critically

Below is further information on both the qualifications:

#### English Language GCSE

The students will study a range of fiction and non-fiction texts. The texts in the exam are unseen and thus students will be developing their reading strategies throughout the programme to prepare them for the unfamiliar. Students will also be developing their independent writing skills: focusing on both the creative and the technical elements of writing.

<b>Paper 1: Fiction and Imaginative writing (40%)</b>	<b>Paper 2: Non-fiction and Transactional Writing (60%)</b>
Section A: Reading: questions on an unseen 19th-century fiction extract.	Section A: Reading: questions on two thematically linked, unseen non-fiction extracts.
Section B: Writing: a choice of two writing tasks. The tasks are linked by a theme to the reading extract.	Section B: Writing: a choice of two writing tasks. The tasks are linked by a theme to the reading extracts.
The total number of marks available is <b>64</b>	The total number of marks available is <b>96</b> .
<b>1 hour and 45 minutes.</b>	<b>2 hours.</b>

Below is a breakdown of how the qualification will be examined:

#### English Literature

The students will be working towards the Edexcel English Literature GCSE. Students will be studying set texts from different historical periods. The texts include: Shakespeare's 'The Twelfth Night'; R.C Sheriff's 'Journeys End'; R.L Stevenson's 'Jekyll and Hyde' and the 'Conflict' cluster from the Edexcel Poetry Anthology.

Below is a breakdown of how the qualification will be examined:

<b>Paper 1: Shakespeare and Post-1914 Literature (50%)</b>	<b>Paper 2: 19th-century Novel and Poetry (50%)</b>
Section A Shakespeare (Twelfth Night): a two-part question, with the first task focused on an extract of approximately 30 lines. The second task is focused on how a theme reflected in the extract is explored elsewhere in the play.	Section A 19th-century novel (Jekyll and Hyde): a two part question, with the first part focussed on an extract of approximately 400 words. The second part is an essay question exploring the whole text.
Section B Post-1914 British play or novel: ONE essay question (Journeys End): ONE essay question	Section B Part 1: ONE question comparing a named poem from the Pearson Poetry Anthology collection to another poem from that collection. The named poem will be shown in the question paper. Part 2: ONE question comparing two unseen contemporary poems.
The total number of marks available is <b>80</b>	The total number of marks available is <b>80</b> .
<b>1 hour and 45 minutes.</b>	<b>1 hour and 45 minutes.</b>

### Speaking and Listening Endorsement

Candidates must undertake a 10 minute prepared spoken presentation on a specific topic in a formal setting, listen and respond to questions and feedback, and use spoken English effectively. Students are awarded a grade (Pass, Merit or Distinction). The presentation is worth 0% of the total GCSE.

### Mathematics

At SGS Berkeley Green UTC our Mathematics curriculum has the following aims:

- To encourage students to think independently and be confident when dealing with numbers and data.
- To enable students to apply their knowledge and skills to solve real world problems, as well as abstract questions, using mathematical reasoning and proof.
- To promote the use of mathematics in other areas of the curriculum and demonstrate to students the career opportunities available with a mathematics qualification.

In year 10 and 11 we will be focused on preparations for the new GCSE course through developing skills, applying them to complex problems and ensuring a robust exam technique. At Berkeley Green we will be following the Edexcel GCSE course, which awards grades 9-1, and has two tiers, Foundation (grades 5-1) and Higher (grades 9-4). In terms of which tier an individual will be entered for, this is a decision which will be taken during the first term and discussed with students and their families. All examinations take place at the end of Year 11 and will consist of three papers, each 90 minutes long, with one non-calculator and 2 calculator papers. For this reason we would encourage all students to have their own scientific calculator and to bring it to every lesson. The course textbook and additional materials are accessed online through Kerboodle.

### Science

#### *What is it?*

Science is the systematic study of the physical and natural world through observation and experimentation. Science is a mixture of practical and theory, teaching will consist of laboratory practical, lectures, seminars, projects, presentations and demonstrations.

*How is it assessed?*

The UTC will be delivering AQA Science: Trilogy which is worth 2 GCSE's. If you choose Science as an option then this converts to Biology, Chemistry and Physics as separate subjects. There are 6 exams all taken at the end of the course.

*What will it cover?*

Biology will cover subjects such as Cell biology, Organisation, Infection and response, Inheritance variation and evolution, Homeostasis and response, Bioenergetics and Ecology.

Chemistry will cover subjects such as Atomic structure and the periodic table, Bonding, structure, and the properties of matter, Quantitative chemistry, Chemical changes, Energy changes, The rate and extent of chemical change, Organic chemistry, Chemical analysis, Chemistry of the atmosphere and Using resources.

Physics will cover subjects such as Energy, Electricity, Particle model of matter, Atomic structure, Forces, Waves, Magnetism and electromagnetism.

# Pathway Choice

## Digital Pathway

### *What is it?*

During this course students will complete two qualifications that will present our students with a wide range of skills in a number of different areas of ICT. Throughout the course there is an underlying learning aim of developing the students' academic and practical understanding of cyber security.

### *How is it assessed?*

The Edexcel Level 2 Digital Applications qualification consists of two units. The first is a web design exam that will teach students how to build a website for a client brief. There will be a second coursework based unit introducing the concept of creating a multimedia product for a client. This could be a presentation, a selection of images or a computer game.

### *What will it cover?*

The UK is a world leader in the creative digital industries, such as in the creation of visual effects for films and computer games. However, there is growing recognition that we need to build on and improve the UK's capability and capacity for technical innovation and creativity in this area.

This qualification has been designed to engage and enthuse young people with an interest in creative computing, for example digital graphics and animations, interactive multimedia products and computer games.

## Engineering Pathway

### Smart Product Design and Manufacture

#### *What is it?*

Engineering is the process of analysing problems and products, using technical and practical skills to produce improved and innovative outcomes. It is the combination of theory and practical work. The teaching will consist of lectures, demonstrations and workshop sessions.

#### *How is it assessed?*

The UTC will be delivering BCAi Learn Level 2 Award in Smart Product Design and Manufacture. The course work is divided into three units; Electronics and programming, Product Design and Product Manufacture. The Assessment is a combination of coursework and a final written exam.

#### *What will it cover?*

Electronics and programming will include gaining an understanding of electronic components and their uses. Students will explore coding by using an Arduino to control their circuits and this will form the basis of their final product.

Smart Product Design will include the creation of sketches, initial design ideas, developing into a final design. The product will be modelled using Computer Aided Design (CAD) and will incorporate the electronics completed in the first unit.

Smart Product Manufacture the final product can be prototyped through and combination devices including lazer cutter and 3D printer. It will need to contain the electronics enabling it to function successfully.

# Option Subjects

## Computer Science

### *What is it?*

The OCR GCSE in Computer Science will build on the knowledge, understanding and skills established through the Computer Science elements of the Key Stage 3 programme of study. The content has been designed not only to allow for a solid basis of understanding but to engage students and get them thinking about real world application.

### *How is it assessed?*

There will be three units, two of which will be written exams, and the third is a non-examined element consisting of 20 supervised hours of practical programming. The two written exams are 40% of the final grade each, and the non-examined element is 20% of the final mark.

### *What will it cover?*

#### Unit 1 – Computer Systems

You will learning about the following:

- Systems Architecture
- Memory
- Storage
- Wired and wireless networks
- Network topologies, protocols and layers
- System security
- System software
- Ethical, legal, cultural and environmental concerns

#### Unit 2 – Computational thinking, algorithms and programming

You will learning about the following:

- Algorithms
- Programming techniques
- Producing robust programs
- Computational logic
- Translators and facilities of languages
- Data representation

#### Unit 3 - Programming project

- Programming techniques
- Analysis
- Design
- Development
- Testing and evaluation and conclusions

## Product Design

### What is it?

Product Design is essentially the efficient and effective generation and development of ideas through a process that leads to new products. It is the combination of theory and practical work. The teaching will consist of lectures, demonstrations and workshop sessions.

### How is it assessed?

The UTC will be delivering the NCFE Level 2 Certificate in Craft. The course is divided into four units comprising; research and enterprise skills, design development, responding to the design brief and manufacture of the final product.

### What will it cover?

Research and enterprise will be achieved by assessing the tools, materials and techniques that will need to be considered to manufacture the final product. The enterprise skills ensure that the students take into account any constraints that may affect the production of their manufactured article.

During the development of their design, students will be given the opportunity to create prototypes of their work in both 2D and 3D. This process will inform the choice of materials and techniques that will be used in the production of the final product.

The manufacture of the final product will allow students to demonstrate their planning skills and accuracy of manufacture. They will evaluate their work against the design brief, and consider the creative and technical processes they have used.

## Geography

### What is it?

AQA GCSE Geography is based on a balanced framework of physical and human geography. It allows students to investigate the link between the two themes, and approach and examine the battles between the man-made and natural worlds.

### How is it assessed?

Your GCSE exams will be split into 3 papers – one on each of Units 1, 2 and 3. Unit 4 (Geographical Skills) is assessed in all 3. We will also attend a minimum of two days in the field, looking at geography in action!

### What will it cover?

#### *Unit 1 Exam: Physical Environment*

You have to answer ALL the questions in sections A and B, but you have a CHOICE in section C.

#### Section A: The challenge of Natural Hazards

- Natural Hazards
- Tectonic Hazards
- Weather Hazards
- Climate Change

#### Section B: The Living World

- Ecosystems

- Tropical Rainforests
- EITHER Hot Deserts OR Cold Environments

#### Section C: Physical Landscapes in the UK

- UK Physical Landscapes
- TWO FROM Coastal Landscapes, River Landscapes OR glacial landscapes in the UK.

#### *Unit 2 Exam: Human Environment*

You have to answer ALL the questions in Sections A and B, but you have a choice in Section C

#### Section A: Urban Issues and Challenges

#### Section B: The Changing Economic World

#### Section C: The Challenge of Resource Management

- Resource Management
- EITHER Food OR Water OR Energy

#### *Unit 3 Exam: Geographical Application*

You have to answer ALL the questions in the exam:

#### Section A: Issue Evaluation:

- You'll get some material 12 weeks before the exam. You have to analyse and interpret it, then answer the questions about a related issue in the exam.

#### Section B: Fieldwork

- In the exam, you'll have to write about fieldwork techniques and analyse some data that you're given. You'll also have to answer questions about your own fieldwork enquiries.

## Spanish

### *What is it?*

Knowing another language gives you a skill for life which will prepare you to take your part in a global community either through further study or the world of work. This GCSE in Spanish is increasingly valued and favoured by employers and universities. You will extend your ability to communicate effectively in speaking and writing in Spanish and you will learn to recognise and respond to key information. You will develop memorisation techniques and your ability to cooperate with others and work as a team.

### *How is it assessed?*

There will be four different exams, each worth 25%. These will be assessing the following skills: writing, speaking, listening and reading.

### *What will it cover?*

These are the topics on which all exams will be based.

#### Theme 1: Identity and culture:

- Me, my family and friends
- Technology in everyday life
- Free-time activities
- Customs and festivals in Spanish-speaking countries/communities

### Theme 2: Local, national, international and global areas of interest:

- Home, town, neighbourhood and region
- Social issues
- Global issues
- Travel and tourism

### Theme 3: Current and future study and employment:

- My studies
- Life at school/college
- Education post-16
- Jobs, career choices and ambitions

## Sport

### What is it?

The Sports option is designed to encourage personal development through practical participation and performance in a range of sports and exercise activities. It will give learners a wider understanding and appreciation of health-related fitness, sports and exercise through a selection of optional specialist units. The course will develop their people, communication, planning and team-working skills.

### How is it assessed?

Over the 2 years you will be assessed through a mixture of course work and external examination. The external assessment uses an onscreen test. The test lasts for one hour and has 50 marks. Learners will complete an onscreen test that has different types of questions including objective and short-answer questions. Where appropriate, questions contain graphics, photos, animations or videos.

### What will it cover?

#### *Unit 1: Fitness for Sport and Exercise (Year 10)*

This unit has links to, and underpins, the other units for sport. You will cover the components of physical and skill-related fitness and the principles of training. Look at different fitness training methods for developing components of fitness, and gain knowledge and skills in undertaking and administering fitness tests.

#### *Unit 2: Practical Sports Performance (Year 10)*

Introduces learners to a variety of different sports and, through participating in different sports, it is expected that learners will develop knowledge of the associated rules, regulations, scoring systems, skills, techniques and tactics.

#### *Unit 5: Training for Personal Fitness (Year 11)*

This unit will give the understanding and skills required to improve your own and other people's fitness. This will enable you to promote health and demonstrate skills for a number of job roles in the sector, such as sports coaches and personal trainers.

#### *Unit 6: Leading Sports Activities (Year 11)*

There are many roles in the working environment that require effective and successful leadership. This unit provides learner with what could be your first step into leadership through a sporting medium.

## Assessment Summary

	<b>External Exams</b>	<b>Internal Coursework</b>
<b>English</b>	2 exams in English Language 2 exams in English Literature <i>(sat at the end of year 11)</i>	N/A
<b>Maths</b>	3 exams <i>(sat at the end of year 11)</i>	N/A
<b>Science</b>	6 exams <i>(sat at the end of year 11)</i>	N/A
<b>Digital</b>	1 exam <i>(sat in January of year 10)</i>	1 coursework unit <i>(to be completed by Easter of year 10)</i>
<b>Engineering</b>	1 exam <i>(sat in January of year 10)</i>	2 coursework units <i>(to be completed by Easter of year 10)</i>
<b>Computer Science</b>	2 exams <i>(sat at the end of year 11)</i>	1 NEA unit <i>(to be completed by February of year 11)</i>
<b>Geography</b>	3 exams <i>(sat at the end of year 11)</i>	N/A
<b>Sport</b>	2 on-screen exams <i>(sat at the end of year 10 and the end of year 11)</i>	2 coursework units <i>(to be completed by Easter in year 11)</i>
<b>Spanish</b>	4 exams <i>(sat at the end of year 11)</i>	N/A