Key Stage 4 Curriculum

2023-2025

Welcome to our key stage 4 curriculum booklet which contains lots of information about the subject that you can study with us. We are passionate about our specialisms of Digital Technologies and Engineering and can provide you with access to world class resources to help you learn. We are also introducing a Digital and Creative Media specialism this year which allows or students to build on their interest of how media is used in society.

It would be very helpful if you could familiarise yourself with the different options available to your child and discuss this with them. During your child's one to one consultation with a member of senior staff at Berkeley Green we will discuss the different options on interest.

At the end of your child's first two years at the UTC they will achieve at least 9 GCSEs or GCSE equivalent qualifications. This could increase if they are selected to take triple science or further maths. This number of qualifications will set them up nicely to achieve well with us in sixth form when the time comes.

Compulsory Subjects	Specialist Options	Other Options	Extended Curriculum
English Language	Creative iMedia	Geography	Employer Projects
English Literature	Cyber security and Digital Forensics	History	Enrichment
Maths	Computer Science	Sport	ViP
Combined Science (or Separate Sciences in Biology, Chemistry and Physics)	Engineering	Graphic Design	PE
	Design and Technology	Enterprise	Private Study
			Further Maths

Please note that some of these subjects may not run if there is insufficient interest or due to staffing constraints beyond our control.

Contents

English Language

Optional:	Compulsory
Exam Board:	EdExcel
Tiered Entry:	No
Type of qualification:	GCSE
Grade set:	9-1
Examined through:	Two written exams at the end of year 11
Course content:	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.
Progression routes:	GCSE English Language is a vital qualification for all careers. It will set you up well to access our full range of post 16 courses.
Find out more:	english@berkeleygreenutc.org.uk
Student opinion:	“I really enjoy learning how writing is put together and how language is a tool that you can use in lots of different ways.” Year 11 student

English Literature

Optional:	Compulsory
Exam Board:	EdExcel
Tiered Entry:	No
Type of qualification:	GCSE
Grade set:	9-1
Examined through:	Two written exams at the end of year 11
Course content:	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 'Romeo and Juliet'; R.C Sheriff's 'Journeys End'; R.L Stevenson's 'Jekyll and Hyde' and the 'Conflict' cluster from the Edexcel Poetry Anthology.
Progression routes:	A good grade in English Literature will allow you to access any qualification in our post 16 courses. You will build on your ability to analyse texts throughout our Digital and Engineering pathways.
Find out more:	english@berkeleygreenutc.org.uk
Student opinion:	"I really like being able to study different types of literature and analyse text to draw out meaning. I am able to apply the skills I learn in English Literature to my specialism. " Year 10 student

Mathematics

Optional:	Compulsory
Exam Board:	EdExcel
Tiered Entry:	Yes
Type of qualification:	GCSE
Grade set:	9-1
Examined through:	Three written examinations to take place at the end of year 11.
Course content:	The course will cover the following areas of Number, Algebra, Ratio, proportion and rates of change, Geometry and measures, Probability and Statistics. It includes such topics as surds, quadratic equations, trigonometry, tree diagrams and correlation. Two tiers are available: Foundation and Higher (content is defined for each tier). The qualification consists of three equally-weighted written examination papers at either Foundation tier or Higher tier.
Progression routes:	A good GCSE in Maths would help students access any of our courses in sixth form. They have a choice of studying Maths in Context AS level, or Maths or Further Maths A level.
Find out more:	maths@berkeleygreenutc.org.uk
Student opinion:	‘Maths GCSE is epic – it overlaps and supports our other subjects’ Y11 student
Further maths	All of our students will study GCSE Maths, however some students will be given the opportunity to study a Further Maths Level 2 qualification. More information on Further maths GCSE can be found later in this booklet.
	‘It gives me further understanding of higher level maths and reinforces ideas’ Year 11 student ‘It gives further insight into topics covered at GCSE maths’ Year 11 student

Science

Optional:	Compulsory
Exam Board:	AQA
Tiered Entry:	Yes
Type of qualification:	2 x GCSE (Trilogy) 3x GCSE for separate science
Grade set:	9-1
Examined through:	Six written examinations to take place at the end of year 11.
Course content:	See Biology, Chemistry and Physics later in this booklet.
Progression routes:	Good grades in Science would allow students to study the subjects further in sixth form and are often prerequisites to apprenticeships
Find out more:	science@berkeleygreenutc.org.uk
Student opinion:	'I really enjoy studying science. It has helped me to understand the world around me and allows the option of taking my science knowledge further at KS5. I like the links between physics and engineering and I am thinking of bioengineering in the future.' Year 11 student

Most of our students will study GCSE Combined Science Trilogy in which they will achieve two GCSE Science qualifications in a combination of Biology, Chemistry and Physics. However some students will be given the opportunity to study each of the three sciences separately in which they will achieve three GCSE Science qualifications. More information on the separate sciences can be found later in this booklet.

Creative iMedia

Optional:	Optional
Exam Board:	OCR
Tiered Entry:	No
Type of qualification:	Cambridge Nationals
Grade set:	L2 Dist* - L1 Pass
Examined through:	Two controlled assignments. One written examination to take place at the end of year 11.
Course content:	In this course you will develop your understanding of how media products are created for specific audiences and purposes. You will explore the relationship between genre, narrative and representation in media products, and develop your understanding of how they are interpreted by audiences. You will also you will develop practical media production skills and techniques.
Progression routes:	Suitable for progressing onto the UTC's Level 3 full-time Cyber & Digital course.
Find out more:	office@berkeleygreenutc.org.uk
Student opinion:	"We get to apply our learning about the Creative Media industry in practice through filming, image editing and manipulating sound." Year 11 student

Cyber Security and Digital Forensics

Optional:	Optional
Exam Board:	TLM
Tiered Entry:	No
Type of qualification:	Vocational Award
Grade set:	L2 Dist* - L2 Pass
Examined through:	40% coursework 60% practical and written exam
Course content:	The qualification is designed to give students a wide ranging and practical understanding of the skills and knowledge required to design and protect both internet and network-based systems from harm. They are taught how to recognise the various threats to systems, assess the risks these threats pose using industry standard metrics, and be able to plan and action a response.
Progression routes:	Suitable for progressing onto the UTC's Level 3 full-time Cyber & Digital course.
Find out more:	office@berkeleygreenutc.org.uk
Student opinion:	"We develop our practical cyber security skills and learn how things happen in the real world" Year 10 student

Computer Science

Optional:	Optional
Exam Board:	OCR
Tiered Entry:	No
Type of qualification:	GCSE
Grade set:	9-1
Examined through:	Two written examinations to take place at the end of year 11.
Course content:	You will learn to understand and apply the fundamental principles and concepts of Computer Science, including abstraction, decomposition, logic, algorithms, and data representation. You will also analyse problems in computational terms through practical experience of solving such problems, including designing, writing and debugging programs
Progression routes:	This course would lead perfectly onto our A Level in Computer Science. You may also want to think about studying A Level Maths using the mathematical skills developed within this course.
Find out more:	digital@berkeleygreenutc.org.uk
Student opinion:	“I learn a lot in lessons as they are enjoyable. We learn a mix of theory and how to program and I am challenged in every lesson.” Year 11 student

Engineering

Optional:	Optional specialism
Course:	Engineering
Exam Board:	WJEC
Tiered Entry:	No
Type of qualification:	Vocational Award
Grade set:	L2 Dist* - L1 Pass
Examined through:	Two Units of controlled assessment One final written exam
Course content:	The WJEC Engineering course covers many skills and is divided into three units. In the first unit you will focus on disassembly, design and technical drawings. In the second unit, you will learn how to interpret technical drawings and to develop you metal working skills in the engineering barn. The third unit is an externally assessed exam that will test your wider knowledge of engineering.
Progression routes:	Students who complete this qualification may want to develop their Engineering skills and go on to study for the Level 3 BTEC National Extended Diploma in Engineering course, or study 'A' Levels in Maths, Further Maths and Physics through the Berkeley Green UTC Sixth
Find out more:	engineering@berkeleygreenutc.org.uk
Student opinion:	'The Engineering course is great, it offers opportunities for practical work. Thanks to this my knowledge of Engineering and careers has been broadened widely.' Year 11 student

Design and Technology

Optional:	Optional specialism
Course:	Design and Technology
Exam Board:	AQA
Tiered Entry:	No
Type of qualification:	GCSE
Grade set:	9-1
Examined through:	One controlled assessment One final written exam
Course content:	The AQA Design Technology course covers all aspects of designing and making. In year 10 you will focus on building your knowledge of the theory aspects of the course, including materials, processes and the work of eminent designers. You will also be developing your designing and making skills. In year 11 you will be completing your controlled assessment and final examination. Both of these elements contribute equally to the final grade.
Progression routes:	Students who complete this qualification may want to use the design and make skills to help them succeed at the Level 3 BTEC National Extended Diploma in Engineering course through the Berkeley Green UTC Sixth Form.
Find out more:	engineering@berkeleygreenutc.org.uk
Student opinion:	'The Engineering course is great, it offers opportunities for practical work. Thanks to this my knowledge of Engineering and careers has been broadened widely.' Year 11 student

Biology

Optional:	Optional subject
Exam Board:	AQA
Tiered Entry:	Yes
Type of qualification:	GCSE
Grade set:	9-1
Examined through:	Two written examinations to take place at the end of year 11.
Course content:	Biology will cover subjects such as Cell biology, Organisation, Infection and response, Inheritance variation and evolution, Homeostasis and response, Bioenergetics and Ecology.
Progression routes:	A good GCSE in Biology would help students access any of our courses in sixth form, but especially our Applied Science option.
Find out more:	science@berkeleygreenutc.org.uk
Student opinion:	'Biology is an interesting subject and I enjoy learning about how our body works and the practical investigations. I want to continue into medical science so this course is perfect for me.' Year 11 student

Chemistry

Optional:	Optional subject
Exam Board:	AQA
Tiered Entry:	Yes
Type of qualification:	GCSE
Grade set:	9-1
Examined through:	Two written examinations to take place at the end of year 11.
Course content:	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.
Progression routes:	A good GCSE in Chemistry would lead onto our A Level Physics course in Sixth Form. You could also consider our Applied Science qualification.
Find out more:	science@berkeleygreenutc.org.uk
Student opinion:	‘Chemistry allows me to understand things we cannot see in everyday life. It makes the invisible visible and I love looking at the practical side too!’ Year 11 student

Physics

Optional:	Optional subject
Exam Board:	AQA
Tiered Entry:	Yes
Type of qualification:	GCSE
Grade set:	9-1
Examined through:	Two written examinations to take place at the end of year 11.
Course content:	Physics will cover subjects such as Energy, Electricity, Particle model of matter, Atomic structure, Forces, Waves, Magnetism and electromagnetism. The separate GCSE in physics also includes a unit on cosmology and astrophysics.
Progression routes:	A good GCSE in Physics would lead onto our A Level Physics course in Sixth Form. You could also consider our Applied Science qualification.
Find out more:	science@berkeleygreenutc.org.uk
Student opinion:	'Physics allows me to understand the laws and properties of engineering. I enjoy developing my scientific knowledge in class and examining practical elements too!' Year 11 student

Geography

Optional:	Optional subject
Exam Board:	AQA
Tiered Entry:	No
Type of qualification:	GCSE
Grade set:	9-1
Examined through:	Three written examinations to take place at the end of year 11.
Course content:	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.
Progression routes:	A GCSE in Geography would lead nicely onto a number of our Level 3 courses. The investigation skills you develop would work well with our Cyber Security and Digital Technologies course, and would help you succeed in our range of A Levels.
Find out more:	geography@berkeleygreenutc.org.uk
Student opinion:	“I find learning about the links between human geography and physical geography really interesting. Being able to study geographic events around the world has allowed me to learn about lots of different cultures” Year 11 student.

History

Optional:	Optional subject
Exam Board:	AQA
Tiered Entry:	No
Type of qualification:	GCSE
Grade set:	9-1
Examined through:	Two written examinations to take place at the end of year 11.
Course content:	This course will enable students to learn the long history of how the movement of people – European, African and Asian - to and from these islands has shaped the story of this nation for thousands of years.
Progression routes:	This qualification would provide students with the skills needed to succeed in a number of Level 3 qualification. The analytical nature of the course lends its self nicely to courses such as Digital technologies and any of our A Levels.
Find out more:	english@berkeleygreenutc.org.uk
Student opinion:	“I really enjoy studying history because I’m interested in why people did what they did. I also really like how different it is to my other subject which makes my day really varied” Year 11 student

Sport

Optional:	Optional subject
Exam Board:	Pearson
Tiered Entry:	No
Type of qualification:	BTEC Level 1/Level 2 Tech Award in Sport
Grade set:	L2 Dist* - L1 Pass
Examined through:	Component 1: Preparing Participants to Take Part in Sport and Physical Activity **Non-exam internal assessment** set by Pearson, marked by the centre and moderated by Pearson. The Pearson-set Assignment will be completed in approximately 5 hours of supervised assessment. 60 marks. Component 2: Taking Part and Improving Other Participants Sporting Performance **Non-exam internal assessment** set by Pearson, marked by the centre and moderated by Pearson. The Pearson-set Assignment will be completed in approximately 4 hours of supervised assessment.60 marks. Component 3: Developing Fitness to Improve Other Participants Performance in Sport and Physical Activity. **External assessment** set and marked by Pearson, completed under supervised conditions. The assessment will be completed in 1.5 hours within the period timetabled by Pearson. 60 marks.
Course content:	The Tech Award gives learners the opportunity to develop sector-specific applied knowledge and skills through realistic vocational contexts. Learners will have the opportunity to develop applied knowledge and skills in the following areas: ● Investigating provisions for sport including equipment and facilities to enhance sport ● Planning and delivery of sport drills and sessions ● Fitness for sport including fitness testing and methodology.
Progression routes:	Completion of Level 2 Sport would provide students with the life skills needed to succeed in many different areas. Students could consider working toward our Level 3 BTECs in Applied Science, Engineering or Business, or look to complete a Level 3 Sport qualification.
Student opinion:	“I love learning about Fitness and how the body works and adapts to training. BTEC Sport shows me how to link theory and practical together, and I feel I have become a much stronger leader throughout the course” Year 11 student

Graphic Design

Optional:	Optional subject
Exam Board:	NCFE
Tiered Entry:	No
Type of qualification:	Technical Award
Grade set:	L2 Dist* - L1 Pass
Examined through:	One practical exam and four pieces of coursework
Course content:	The NCFE Graphics course develops your understanding of the Graphics Industry from the basic components to the presentation of your portfolio. The six units focus on graphical components, studying the work of existing designers and using their influences in your designs, working on a design brief, how to present and select work for your portfolio and careers in Graphic Design.
Progression routes:	Students who complete this qualification may want to consider studying the course at Level 3, or use the design skills to help them succeed at the Level 3 engineering course through the Berkeley Green UTC Sixth Form.
Find out more:	engineering@berkeleygreenutc.org.uk
Student opinion:	'The Graphics course is one of the more creative choices in Berkeley Green. It is useful for both Engineering and Cyber specialism'. Year 10 student

Enterprise

Optional:	Optional subject
Exam Board:	Pearson
Tiered Entry:	No
Type of qualification:	BTEC Tech award
Grade set:	L2 Dist* - L1 Pass
Examined through:	Two pieces of coursework and one exam at the end of year 11
Course content:	Learners will explore different enterprises to develop their knowledge and understanding of the characteristics of enterprises and the skills needed by entrepreneurs to be successful. This will include studying market research, micro-enterprise, marketing and finance.
Progression routes:	Students who complete this qualification may want to consider studying digital or engineering courses at Level 3. The course is designed to give learners an overview of the key concepts around successful business and develop skills that can be applied to all future studies and employment.
Find out more:	office@berkeleygreenutc.org.uk
Student opinion:	This is a new qualification not yet offered by the UTC

Extended Curriculum

Employer Project

Employers make a big contribution to our curriculum at key stage 4, with regular visits to lessons and student interview preparations. We also give our students ongoing opportunities to work on projects that employers have set and present their finished solutions to the employers for feedback.

Enrichment

We offer an enrichment programme that allows students to explore learning away from their chosen subjects. This programme is designed to develop skills and understanding of concepts that would improve their employability skills moving forward. Examples of options in our enrichment programme are robot building, Royal Navy engineering project, community engagement and photography and Photoshop.

ViP

All students at the UTC receive regular PSHE, RSE and RE sessions, both through tutor time and in designated ViP lessons. Students study a range of personal development topics including living responsibly, healthy relationships, and living in the wider world.

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PE

Physical wellbeing is an important part of any young person's development. We have regular timetabled physical education lessons that allow students to stay physically healthy as well developing vital skills in leadership, teamwork and resilience.

Private Study

In order to succeed at their GCSEs students need to be able to independently learn and reflect on their learning. We provide structured time for students to develop this skill guided by our teachers. We use this time to teach students how to use learning resources in the most effective way, as well as teaching them key revision tips and techniques that they need moving forward.

Further Maths

Maths is a subject that is at the heart of everything we do at the UTC, and we look for any opportunity to really challenge our students in this subject. For our most able mathematicians we offer the opportunity to study for an additional further maths qualification alongside their regular GCSE in Mathematics. This would allow them to learn maths to a higher level than they would in the regular GCSE and would set them up nicely to access A Level Maths and A Level Further Maths with us at Sixth Form.