

CTEC Applied Science (Extended Certificate)

What will I study?

The exam board for this course is OCR.

The course is made up of two examined units in Year 12 and 3 controlled assessment tasks for the units in Year 13. At the end of the course you will be awarded one of 4 grades – Distinction*, Distinction, Merit and Pass. (Students who fail to achieve a pass grade will receive an Unclassified U grade.)

You will gain an Extended Certificate which is equivalent to **ONE** A level and should be taken with other vocational courses/ A levels.

Paper	Topic	Length of exam	% of Qualification
1	Scientific Principles	2 Hours	20%
2	Laboratory Techniques	2 Hours	20%
Coursework	Control of Hazards in the Laboratory	Task based internal assessment	20%
Coursework	Product Testing Techniques	Task based internal assessment	20%
Coursework	Microbiology	Task based internal assessment	20%

How will I be taught?

The course is aimed to prepare you for a career in the science by giving you an understanding of how scientists and laboratories work.

You will be taught six periods a week by A Biology, Chemistry, and Physics Specialist.

The course has some similarities to GCSE lessons you've experienced and enjoyed with an increased emphasis on practical work.

In year 12 you will study exam-based units , whereas in year 13 you will study centre-assessed (coursework) units.

What are the entry requirements for this course?

A minimum of grade 5 for English and Maths, and 55 for Combined Science, or two grade 5s from Separate Sciences.

Why study CTEC Applied Science?

The main purpose of the qualification is to develop the scientific principles and practical techniques which, when taken with other complementary qualifications, will prepare you to progress to higher education or employment in areas related to food, human or environmental science. You will learn to carry out experiments safely and accurately when testing products to yield results that can be used to inform the next stage in a scientific process.

What are the Job Opportunities?

CTEC Applied Science provides the practical laboratory skills that employers and universities are looking for. In addition, the course provides:

- transferrable skills necessary to perform laboratory techniques in the workplace
- ability to learn in work-related contexts
- skills for independent learning and development.

The majority of career opportunities in this sector are at degree level, and to gain employment you will mostly likely need to progress from this qualification into higher education or an apprenticeship programme. Once suitably qualified, you may progress into related jobs likely at more junior levels at first such as laboratory technician, food development technician, conservation warden before undertaking further study to progress onto more senior roles such as water quality expert, environmental manager, microbiologist.

Relevant careers include:

Radiographer

Nurse

Microbiologist

Forensic Scientist

Sports Scientist

Environmental Scientist

What if I want more information about [insert subject name]?

Speak to your science teacher or email the Head of Department:

baporiaa@barkingabbeyschool.co.uk

Further information and guidance can be found here: <https://www.ocr.org.uk/qualifications/cambridge-technicals/applied-science/>

Why study CTEC Applied Science at Barking Abbey?

We are excited to run this new course at Barking Abbey for students that wish to enter the science field that are looking for a course with lower entry requirements than A level Sciences.

This course is also a fantastic opportunity for those individuals in gaining practical hands-on laboratory experience which is fundamental requirement for most science-based Higher Education courses, apprenticeships and employment.

What extra curricular opportunities are there in CTEC Applied Science?

The science department at Barking Abbey has a well-established Eco-Warrior team that are always looking for new members that share their vision for a better future. In the past, there have been many trips and debates organised by the team, including a visit to Prague!

In addition, we also run a STEM club after school and we are always grateful for sixth form student volunteers to help run the club for our younger students to enjoy and engage with.

What can I do to prepare for September?

Go over the GCSE content for Biology, Chemistry, and Physics and create a mind map for each of these units:

Unit	Topics	Links
Biology	<ul style="list-style-type: none">• Cell biology and Organisation• Infection and response• Bioenergetics• Homeostasis and response• Inheritance, variation and evolution• Ecology	https://www.youtube.com/watch?v=Xzy4Ze93G3g&list=PLidqqIGKox7X5UFT-expKluR-i-BN3Q1g
Chemistry	<ul style="list-style-type: none">• Atomic structure and the periodic table• Bonding, structure, and the properties of matter• Quantitative chemistry• Chemical changes and Energy changes• The rate and extent of chemical change• Organic chemistry and Chemical analysis• Chemistry of the atmosphere and Using resources	https://www.youtube.com/watch?v=fN8kH9Vvqo0&list=PLidqqIGKox7WeOKVGHxcd69kKqtwrKl8W
Physics	<ul style="list-style-type: none">• Energy and Electricity, and Forces• Particle model of matter• Atomic structure• Wave, Magnetism and electromagnetism• Space	https://www.youtube.com/watch?v=JGwcDCeYRYo&list=PLidqqIGKox7UVC-8WC9djoeBzwxPeXph7