



Subject area: **APPLIED SCIENCE** (updated January 2019)

Course: Certificate & Extended Certificate in Applied Science

Level: AQA Level 3

Course Details - What will the course consist of and how will it be delivered?

Your logical thinking and practical skills will be greatly developed, increasing your organisation and prioritising skills simultaneously! It will lead on well to further education courses including biomedical, forensic and sports science as well as nursing.



Person Specification—is this the right course for you?

Do you enjoy practical work? Are you interested in applying science to the world around you?

Entry on to this course will require you to achieve 4 GCSEs including English and Maths, minimum 4 grade in Science.

Course Outline

The two-year course is split into 6 units as follows:

Unit 1 – Key Concepts in Science (AS – Examination)

The aim of this unit is that learners develop an understanding of key concepts in Biology, Chemistry and Physics, building on their knowledge and understanding of the National Curriculum KS4 Science subject content gained in previous studies. As a result of studying this unit, learners will be able to apply these key concepts to vocational situations and contexts.

Unit 2 – Applied Experimental Techniques (AS - Portfolio)

This unit is designed to introduce learners to new experimental techniques, to reinforce methods met previously and to enable learners to apply these methods to new situations. Contexts for experimental work will be set, for example, in research for new pharmaceutical products, the quality control of existing products and the investigation of new materials, ecological investigations, consideration of the most suitable material to use for a specific application, or in a forensic or pathology laboratory.



Unit 3 – Science in the Modern World (AS – Written Examination with pre-release material)

The aim of this unit is to enable learners to analyse and evaluate scientific information, to develop critical thinking skills and to understand the use of the media to communicate scientific ideas and theories. Learners will develop an understanding of how science is used in organisations and of the roles and responsibilities of their scientifically-qualified staff.

Unit 4 – The Human (A2 – Written Examination)

The aim of this unit is that learners develop an understanding of key concepts relating to the human body. This includes the digestive system, the musculoskeletal system and the nervous system amongst others, building on previous knowledge from Key Stage 4.

Unit 5 - Investigating Science (A2 – Portfolio)

The aim of this unit is to provide learners with an opportunity to undertake the role of a research scientist, following standard procedures to complete a scientific investigation.

The context of the investigation will enable learners to use their knowledge and skills in carrying out a scientific investigation.



Unit 6 – Optional: Microbiology or Medical Physics or Organic Chemistry (A2 Portfolio)

Microbiology

The aim of this unit is to develop learners' knowledge and understanding of key microbiological concepts and techniques used when working in biotechnological industries.

Medical Physics

This unit is designed to give learners an understanding of some of the key areas in modern medical physics. It will allow them to look at the scientific basis for modern diagnostic and therapeutic techniques and evaluate the advantages and disadvantages of a range of methods of diagnosing and/or treating different conditions.

Organic Chemistry

This unit is designed to introduce learners to the importance of preparative organic chemistry in a wide range of contexts, from pharmaceuticals, dyes, flavours and fragrances, to solvents and bio-diesel.

Further progression on completion of the course—what opportunities could this course lead towards in the future?

- Progression to higher education – any science, biomedical, forensic and sports science as well as nursing.

A2 assessment

Unit number	Unit title	Assessment type
Mandatory		
1	Key concepts in Science	Written Exam
2	Applied Experimental Techniques	Portfolio
3	Science in the Modern World	Written Exam with pre-release material
4	The Human Body	Written Exam
5	Investigating Science	Portfolio
Optional		
6a	Microbiology	Portfolio
6b	Medical Physics	Portfolio
6c	Organic Chemistry	Portfolio

Other important information

Qualification Level:	Level 3	'A' Level equivalence	1
Awarding Body	AQA	% Written Exam	50%
Lessons per week	5	% Portfolio Evidence	50%
Full course specification	http://filestore.aqa.org.uk/resources/science/specifications/AQA-TVQ01028-TVQ01029-SP-2016.PDF		