OCR
Oxford Cambridge and RSA

Purpose Statement

Cambridge Technical Level 3 Diploma in Laboratory Skills **720GLH**
601/7461/4

The Level 3 Diploma in Laboratory Skills has been developed for learners aged 16+, who enjoy the sciences and want to learn how to apply their skills, knowledge and understanding in food, environmental or human science before progressing on take related courses in higher education.

This qualification will give you the scientific principles and practical techniques to carry out experiments safely and accurately. You will have the opportunity to collect, analyse, evaluate and present primary data. You will also evaluate the analytical techniques to improve the quality and collection of data. This will better prepare you to progress to higher education or employment in areas related to food, human or environmental science.

You will apply your skills, knowledge and understanding to tasks or activities that are relevant to how food, environmental and human sciences are used in the workplace. Having an appreciation of how these are used in work will also help to prepare you for continuing your education in this sector.

The Level 3 Diploma in Laboratory Skills is an Applied General qualification which is equivalent to two GCE A levels. It should fill approximately two thirds of your timetable. This allows for the study of additional vocational or academic qualifications alongside it, e.g. OCR Cambridge Technical in Health and Social Care, Cambridge Technical in Engineering, GCE AS/A level geography, physics, biology or chemistry which it compliments in providing the practical laboratory skills that employers and Universities are looking for.

It is recommended that if you are starting this qualification you will have achieved science qualifications for example GCSEs in science subjects at grade C or above or level 2 vocational qualifications, e.g. OCR Level 2 Cambridge Technical in Science. It is also recommended that you have grade C or above in Maths and English GCSE.

You can choose to follow one of three pathways, Food Science, Human Science or Environmental Science.

Everybody will study three units on:

- Science Fundamentals
- Laboratory Techniques
- Scientific Analysis and Reporting

Those taking the Food Science pathway must also take:

- Control of Hazards in the Laboratory
- Testing Consumer Products
- Food Technology

Those taking the Environmental Science pathway must also take:

- Control of Hazards in the Laboratory
- Environmental Surveying
- Environmental Management

Those taking the Human Science pathway must also take:

- Genetics
- Control of Hazards in the Laboratory
- Testing Consumer Products

Everybody then takes another four units that are relevant to their pathway from a range of optional topics. The choice available depends on the pathway but might include:

- Human Physiology
- Human Nutrition
- Waste Management
- Microbiology
- Crop Production and Soil Science
- Sustainable and Renewable Energy
- Conservation of Biodiversity
- Cell Biology
- Drug Development

All units have been written to reflect current science practices. We have worked with employers and universities who have helped us to embed these practices and to include the transferable skills that they are looking for in future applicants such as:

- knowledge and understanding of biological, chemical and physical principles underlying laboratory science;
- transferrable skills necessary to perform laboratory techniques in the workplace;
- ability to analyse collected data to solve problems within a laboratory setting;
- ability to take a project based approach to research, analysis and development, linking scientific principles and laboratory techniques;
- 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, and conservation wardens before undertaking further study to progress onto more senior roles such as water quality expert, environmental manager, and microbiologist. Examples of employers who offer opportunities for suitably qualified individuals include: conservation organisations; the Environment Agency; water

companies; waste management companies; DEFRA; food producers; pharmaceutical companies, the NHS and local authorities.

This qualification is part of a suite of Cambridge Technicals in Science at Level 2 (Cambridge Technical Level 2 Certificate/Extended Certificate/Diploma in Science) and Laboratory Skills at Level 3. Normally you would take one of the OCR Level 3 Cambridge Technicals in Laboratory Skills because you had already successfully gained Level 2 qualifications in a similar or related subject but there are no formal entry requirements for these qualifications.

This is one of five qualifications available in the Level 3 Cambridge Technicals in Laboratory Skills suite:

- OCR Cambridge Technical Certificate in Laboratory Skills 180GLH (equivalent to 0.5 of an A Level)
- OCR Level 3 Cambridge Technical Extended Certificate in Laboratory Skills 360GLH (equivalent to one A Level)
- OCR Level 3 Cambridge Technical Foundation Diploma in Laboratory Skills 540GLH (equivalent to 1.5 A Levels)
- OCR Level 3 Cambridge Technical Extended Diploma in Laboratory Skills 1080GLH (equivalent to three A levels)

The smaller Certificate will develop the theory of scientific principles and practical techniques and you would take this alongside other complementary science-based qualifications and will prepare you for progression onto the larger sized qualifications in the suite or other similar Level 3 qualifications.

The Extended Certificate will develop skills, knowledge and understanding to perform laboratory techniques. This qualification will complement a study programme containing other science or STEM related qualifications including those from other vocational sectors such as sport or health and social care.

The Foundation Diploma expands on these fundamental skills, allowing you to develop a further range of skills, knowledge and understanding required for research and analytical techniques in the development of products or processes relevant to environmental, food or human science. You may take this as a one year full-time course of study or take it alongside another area of study that complements it as part of a two year full-time study programme.

The Extended Diploma will require you to collect, analyse, evaluate and present primary data. You will evaluate your chosen analytical techniques to improve the quality and collection of data. You will conclude your studies by completing a unit on 'Scientific Research Techniques' which will bring together all knowledge and understanding gained in the theoretical units. It is best suited to you if you wish to progress to HE in the applied science sector.

SUPPORT

The following Universities support this qualification:

University of East Anglia

Bradford University

Brighton University

Details of this support can be found on the OCR website http://www.ocr.org.uk/qualifications/by-type/vocational-education-and-skills/16-19-performance-table-reform/

FURTHER INFORMATION

To find out more about the OCR Level 3 Cambridge Technical Level 3 Diploma in Laboratory Skills please refer to the centre handbook available on the OCR website.

If you have any other queries please contact vocational.qualifications@ocr.org.uk

ABOUT US

OCR is a leading UK awarding body. We provide qualifications which engage people of all ages and abilities at school, college, in work or through part-time learning programmes. Our general and vocational qualifications equip learners with the knowledge and skills they need for their future, helping them achieve their full potential.