

Medical Science Level 3 BTEC Diploma

Type

BTEC Level 3

Level

3

Assessment

100% coursework

Awarding body

BTEC

Entry Requirements

Normal entry requirements for advanced work including a Grade 'C' in a GCSE science subject or BTEC First (Merit level) in a science related area.

About the subject

In Medical Science you will develop the skills and learn the background knowledge useful for employment in the medical services industry. It can also be studied alongside other level 3 courses as a route into Higher Education. It is a practically based subject and requires a hard-working and determined approach to study.

Level 3 Diploma Students will study the following units:

Assessment Unit	Name	Type of Assessment	Completion date
1	Fundamentals of Science	Coursework	January
2	Physiology of Body Systems	Coursework	June
3	Medical Physics	Coursework	June
4	Scientific Practical Techniques	Coursework	January
5	Biochemical Techniques	Coursework	June
6	Microbiological Techniques	Coursework	June
7	Working in the Science industry	Coursework	January Yr2
8	Scientific Investigation	Coursework	January Yr2
9	Perceptions of Science	Coursework	June Yr2
10	Applications of Number/ Informatics	Coursework	June yr2
11	Biomedical Science techniques	Coursework	June yr2
12	Genetics and Genetic Engineering	Coursework	June yr2

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Fundamentals of Science

In this unit you will use microscopes to find out about the different cells and tissues of the body. You will study chemical reactions and bonding and investigate different types of energy. You will explore the topic of electricity and study different types of electromagnetic radiation.

Physiology of Human Body Systems

This unit builds on the Biology from unit 1 and goes on to look at how the digestive system is adapted to process the food we eat. You will also study how the circulatory and respiratory systems work and how their output can be measured.

Biochemical Techniques

Biochemistry is a study of the chemical processes, without which life on Earth could not exist. You will study the structure of the main biological molecules and discover the metabolic pathways that keep us alive.

Scientific Practical Techniques

The ability to sample and test substances and materials is important in many branches of industry, in research work and in forensic science. In this unit you will select and use appropriate instruments for the work being carried out. You will also gain experience of a range of scientific instruments and their use.

Microbiological Techniques

Microbiology skills are in ever-increasing demand as the benefits and threats from these simplest forms of life become better understood. In this unit you will learn the key concepts and techniques of microbiology, and develop the skills needed to work safely in a microbiology laboratory.

Medical Physics Techniques

Medical physics imaging gives the doctor a clearer understanding of the patient's condition so treatment can be planned more effectively and therapy delivered more precisely. In this unit you will study established practices in medical physics imaging including x-rays, ultrasound and MRI.

Working in the Science industry

This unit gives the learner the opportunity design a laboratory and discover the different systems and processes that help it to work effectively

Scientific Investigation

All scientists follow the same scientific procedure. This unit gives you a chance to investigate an observation using a scientific technique

Perceptions of Science

Science does not happen in a vacuum. Its findings often have important consequences for society. In this unit you will explore the impact of Science on society.

Applications of Number/ Informatics

All scientists need to manipulate data, draw graphs and recognize patterns and trends. This unit develops your ability to handle data reliably and effectively in different formats.

Biomedical Science techniques

To understand how we work it is often important to start off at the molecular level. In this unit you will investigate how the body works at the smallest level including the role of the defence mechanisms

Genetics and Genetic Engineering

No modern Science course would be complete without an element of genetics in it. This unit includes classical genetic studies and an up to date investigation of genetic engineering techniques.

What next?

Depending on your other subject choices, Applied Science can provide a lead in to careers in the science industry e.g. as a technician in hospitals, pharmaceutical manufacturing or environmental testing. It can also provide a route into Higher Education as well as providing opportunities to develop a range of skills, techniques and attributes essential for successful performance in working life.



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