Engineering Level 3 Diploma

Where can it take you?

Electronics Engineer

Electronics engineering is a sub-field within electrical engineering. Responsibilities include; designing new electronics, testing circuits, quality assurance, and project management. They are fully certified engineers who have completed a degree in electronics engineering. They can work in broadcasting, telecommunications, construction, mobile technologies and manufacturing industries.

Aeronautical Engineer

Space vehicles to weapons systems, missiles and satellites, or ensuring that an aircraft is strong and safe. You could work on the different components that make up aircraft. Some professionals design jetliners while others draw up plans for passenger planes and helicopters. Aeronautical engineers are responsible for improving flight safety, fuel efficiency and much more.

Mechanical Engineer

As a mechanical engineer you could develop processes and products from the tiny (small component design) to large heavy plant machinery finding efficient solutions to various problems as they come up. This field of engineering is considered as one of the most varied forms. You could find yourself working in any number of fields; medical, power and construction to name but a few.

Marine Engineer

Marine engineering covers a broad spectrum; development and construction of new marine vessels and their component parts. These vessels could be anything from sailboats to military battleships and aircraft carriers. You may also get the opportunity to design engines, create blueprints, and experiment with propulsion devices!

Design Engineer

Design engineers help put together lots of different things, including for instance any themed attractions that you may have visited. Fancy creating a game changing attraction and maybe seeing the world? This is a great career for creative people who are interested in engineering, physics and entertainment. A rollercoaster design team may include electrical engineers, mechanical engineers, drafting and structural engineers.

Mechatronics/Robotics

Mechatronics/robotics combines electronic and mechanical engineering. You could be designing, re-designing, constructing, testing, programming or operating intelligent products and systems. By mixing hardware and software, you would be producing the machinery/robots of the future which can be used for underwater exploration or improving production. You could even create the next generation of robotic floor cleaners.

Electrical Engineer

Electrical engineers focus on the maintenance, design and improvement of products that are powered by or produce electricity. You might wire light aircraft, automobiles, buildings, produce portable music products or GPS devices. You can be the person responsible for the electrical power of the phone in everybody's pocket, medical equipment, a skyscraper or a robot.

Structural Engineer

A structural engineer uses maths and science to shape the world that we live in. They design, and solve problems. There are lots of areas to choose from; civil engineer (how buildings will impact the environment); structural engineer (will it stay together, hold up?) to building services (is the building comfortable, warm, liveable or loveable).

Software Engineer

You could work on systems such as varied as Facebook. There is a shortage in software engineering so lots of support is available. You could create, test, develop, and maintain computer software that millions of people use daily. Computer programs and applications are specially designed by application software engineers.

Environmental Engineer

Could a career investigating land, air and water quality looking for contaminents be for you? Environmental engineers produce purification systems for developing countries to provide improved water sources. The next time you brush your teeth, drink water or take a bath, think of the environmental engineers who have enabled this.

Broadcasting Engineer

The next time you watch a clip on YouTube, Instagram or Vimeo; remember an engineer made this happen. Broadcast and sound engineers operate, test, repair and install electronic equipment. This equipment is used to transmit radio, cable programmes and television. Did you know that they can also produce soundtracks for motion pictures and operate sound for concerts and live events.

Other Careers

Transport engineering, biomedical engineering, medical engineering, process engineering, nuclear engineering, drafting and design engineering, vehicle engineering, mining, and geological engineering, thermal engineering. There are many branches to choose from.

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What to Expect

What does the course involve?

Enter a world of innovation and technological advancement in Engineering!
This latest specification includes a broad range of subjects encompassing the cutting edge of almost every industry.

The wide variety of mental and physical tools that you will acquire on the course provides an excellent skill-set that will equip learners with different strengths and abilities to progress to one of 3 routes:

• Full time Higher Education studies at University/ college towards Degree qualifications.

• Full time employment as the course outcome is a formal Level 3 qualification.

• Work-study combinations (earn as you learn) such as Apprenticeships (Higher National Certificate – HNC or Higher National Diploma – HND) or Management Training Schemes.

You will benefit from the diverse vocational experience of the Engineering team who have all worked in different industries including Automotive, Mechanical, Electrical, Nuclear and Construction prior to teaching.

Some of the subjects that you will learn about are: Engineering Product Design; Microcontroller Systems (Incorporating Robotics and Programming); Computer Aided Design (CAD); Fluid Power Systems (Pneumatics and Hydraulics); Static and Dynamic Mechanical Principles; Electricity and Electronic Principles; Engineering Materials, Manufacturing Processes and Maintenance of Mechanical Systems.

There is a mix of theory and practical elements, and you do not need any previous experience or knowledge of the specialist subjects as we teach them from first principles.

Can I take additional qualifications?

This course is the equivalent of 3 A Levels and it does not have to be supplemented by other qualifications. You may want to consider combining this course with Core Maths and the EPQ to gain a Technical Baccalaureate (Tech Bacc), which is a highly regarded additional qualification favored by employers. For further information on this pathway, please ask at interview.

How will I be assessed?

The various assessment methods include internally assessed units (each of which is usually divided into three assignments), externally marked exams (three, spread over two years), practical ability, a portfolio-based unit and presentations, all of which provide an excellent skill-set for all learners.

All topics are graded as Pass, Merit or Distinction, with an overall grade for the qualification awarded.

What are the costs?

There is no cost for enrolling on the course, but you will be required to contribute each year towards trips, materials costs, and administration for work experience etc. Also, there is a refundable deposit for resources.
The costs incurred are:
• Resource deposit £40 (refundable at the end of the course if all resources borrowed are returned intact).
• Materials/consumables contribution: £25
• Work experiencewill require mandatory health and safety checks each year, costs for these will be confirmed at enrolment

Each student should also purchase their own overalls and safety boots (steel toe cap), either from the One Website or from their own supplier.

What is the duration?

This is a two year course.

Entry Requirements

5 GCSEs 9-4 to include Mathematics grade 6 (due to the high mathematical content of the subject) and English Language grade 4.

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