



## **BTEC NATIONAL CERTIFICATE IN ENGINEERING (OPERATIONS AND MAINTENANCE)**

### **Is this the right course for me?**

The BTEC National Certificate in Operations and Maintenance Engineering is designed to provide a specialist work-related qualification in a range of operations and maintenance occupations including install, operate and maintain complex engineering systems, currently used throughout the broad range of engineering industries. It will give learners the knowledge, understanding and skills that they need to prepare them for employment. The qualification provides career development for those already in work and additionally opens up the opportunity to study at a higher level. You may wish to progress onto an electrical or mechanical engineering course at university or continue your studies at Lowestoft College through a Higher National Certificate or Foundation Degree in Operations Engineering.

### **What will I need to join the course?**

Four GCSE qualifications at grade C or above, expected to include Mathematics, English and Science.

Alternatively a level 2 qualification in a vocationally-based subject is likely to be acceptable.

### **What will I be doing?**

The course consists of 12 modules. You will cover subjects such as

**Electrical and Electronic Principles:** You will gain an understanding of the physical principles governing the operation of electrical and electronic devices and circuits.

**Mechanical Principles and Applications:** You will gain an understanding of the essential principles in static and dynamic engineering systems. This involves investigating the effects of loading on materials, calculating the work done, power and energy transfer and determining the properties of fluid systems.

**Industrial Process Controllers:** This will provide you with the opportunity to configure and program a programmable logic controller (PLC). You will also gain knowledge of fault finding techniques and tools.

**Electro, Pneumatic and Hydraulic Systems and Devices:** You will gain an understanding of how fluid systems are used in the operation of machinery and equipment.

**Engineering Drawing:** This will give you an introduction to the principles of technical drawings and their applications using hand and computer aided drafting (CAD) technique.

**Engineering Project:** This is a very important component of the course. Engineers often find themselves in situations where problems need to be recognised and solutions found. You will need to identify a course of action and follow this through to produce a viable solution to an agreed specification and timescale.

### **How long will the course last and what patterns of attendance are available?**

### **How will my progress on the course be assessed?**

- Part-time BTEC National Certificate (2 year course/ involves attending college one day a week)

- Full-time BTEC National Certificate (1 year course/ involves attending college for three days a week)

**How will my progress on the course be assessed?**

All of the modules will use on-going assessment, mainly through assignments.

**What will I achieve?**

If you complete the programme successfully you will achieve a BTEC National Certificate in Operations and Maintenance Engineering. This qualification is the equivalent to 2 'A' levels.

**What will it cost?**

Tuition fees to be confirmed.

Students under 19 do not pay tuition or exam fees.

**And the future?**

On successful completion of the course, learners can progress into or within employment and/or continue their study in the same vocational area. This might involve studying part-time for the Higher National Certificate or Foundation Degree in Operations Engineering at Lowestoft College or choosing to study full-time an electrical or mechanical engineering course at university.

**What should I do now?**

If you wish to be interviewed for a place on this course please complete an application form and return it to the **Reception or The Advice Centre**.

If you have any queries please ring The Advice Centre on freephone 0800 854 695

It is the policy of this College that everyone is entitled to equality of opportunity in education and training.

Please note that all the details on this fact sheet were correct at the time of printing and may be subject to change.

If you would like this factsheet in larger print or alternative format, e.g. Braille or audio tape, please contact Study Skills Support on (01502) 525191

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