TRAINING 2000

AN AMAZING PLACE WITH AMAZING PEOPLE

HIGHER EDUCATION COURSES BTEC HNC – HIGHER NATIONAL CERTIFICATE

MANUFACTURING ENGINEERING

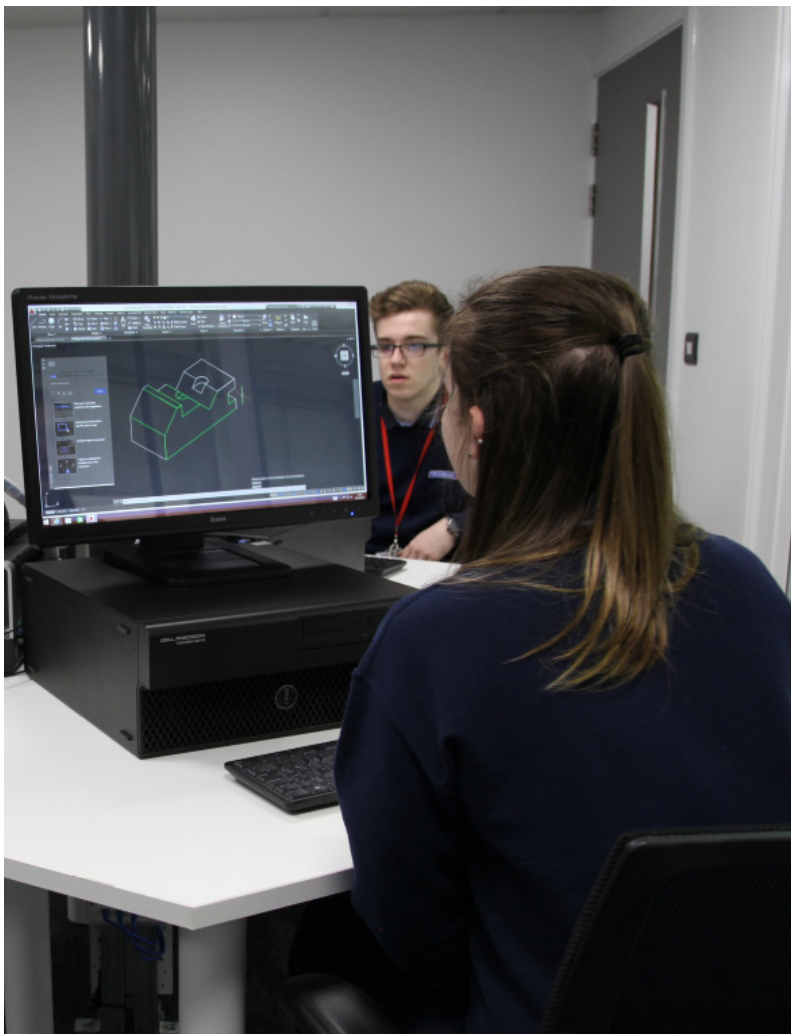
Entry Qualifications: Level 3 diploma in Engineering/Manufacturing or equivalent

Our flexible Higher Education delivery model includes:

- Face-to-face tutorials
- Flexible day delivery to minimise effect on employer
- Opportunities to develop workplace projects within employers
- Study at Blackburn

Our enhanced HNC in Manufacturing Engineering is obtained by studying up to five units per year – enhancing your career opportunities.

If a learner completes the HNC with us, they can top up to a HND in one year.



YEAR ONE:

ENGINEERING MATHS
The aim of this unit is to develop students' skills in the mathematical principles and theories that underpin the engineering curriculum. Students will be introduced to mathematical methods and statistical techniques in order to analyse and solve problems within an engineering context.

ENGINEERING SCIENCE
This unit introduces students to the fundamental laws and applications of the physical sciences within engineering and how to apply this knowledge to find solutions to a variety of engineering problems. Among the topics included in this unit are: international system of units, interpreting data, static and dynamic forces, fluid mechanics and thermodynamics, material properties and failure, and A.C./D.C. circuit theories.

ENGINEERING DESIGN
The aim of this unit is to introduce students to the methodical steps that engineers use in creating functional products and processes; from a design brief to the work, and the stages involved in identifying and justifying a solution to a given engineering need.

MANAGING A PROFESSIONAL ENGINEERING PROJECT
This unit introduces students to the techniques and best practices required to successfully create and manage an engineering project designed to identify a solution to an engineering need. While carrying out this project students will consider the role and function of engineering in our society, the professional duties and responsibilities expected of engineers together with the behaviours that accompany their actions.

MECHANICAL PRINCIPLES
The aim of this unit is to introduce students to the essential mechanical principles associated with engineering applications. Topics included in this unit are: behavioural characteristics of static, dynamic and oscillating engineering systems including shear forces, bending moments, torsion, linear and angular acceleration, conservation of energy and vibrating systems; and the movement and transfer of energy by considering parameters of mechanical power transmission systems.

YEAR TWO:

QUALITY AND PROCESS IMPROVEMENT
This unit introduces students to the importance of quality assurance processes in a manufacturing or service environment and the principles and theories that underpin them. Topics included in this unit are: tools and techniques used to support quality control, attributes and variables, testing processes, costing modules, the importance of qualifying the costs related to quality, international standards for management (ISO 9000, 14000, 18000), European Foundation for Quality Management (EFQM), principles, tools and techniques of Total Quality Management (TQM) and implementation of Six Sigma.

MACHINING AND PROCESSING OF ENGINEERING MATERIALS
The aim of this unit is to introduce students to the application of a variety of material forming processes involved in the production of components and articles for everyday use. Among the topics included in this unit are: conventional machining, shaping and moulding processes used in the production of components, machine tooling, jigs and fixtures required to support the manufacture of components, using metallic and non-metallic materials such as polymers and composites.

LEAN MANUFACTURING
The aim of this unit is to introduce students to the principles and processes of lean manufacturing, so that they can become an effective and committed practitioner of lean in whatever industry sector they are employed in. To do this, the unit will explore the tools and techniques that are applied by organisations practicing lean. The students will consider both the benefits and challenges of using lean manufacturing, and become sufficiently knowledgeable about the most important process tools and techniques to be able to operate and use them.

PRODUCTION ENGINEERING FOR MANUFACTURE
This unit introduces students to the production process for key material types; the various types of machinery used to manufacture products and the different ways of organising production systems to optimise the production process; consideration of how to measure the effectiveness of a production system within the overall context of the manufacturing system; and an examination of how production engineering contributes to ensuring safe and reliable operation of manufacturing.

OPERATIONS AND PLANT MANAGEMENT
The underlying aims of this unit are to develop the students' knowledge of the engineering fundamentals that augment the design and operation of plant engineering systems, and to furnish them with the tools and techniques to maintain the ever more technological equipment.

COURSE COSTS FOR 2020/21 ACADEMIC YEAR:
£2000
+ VAT

For more information or to enquire about booking a place:
www.training2000.co.uk,
email info@t2000.co.uk or call 01254 54659

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