

Higher National Diploma in Manufacturing Engineering for England

Subject Area	Engineering
Course Type	Higher Education
Study Level	Level 5
Delivery Mode	Full-time
Location	David Hockney Building
Duration	2 Academic Years
Start Date	September 2024
Course Code	PFHN065

Course Summary

Unlock the world of advanced manufacturing technologies with our HND in Manufacturing Engineering. This cutting-edge course is designed for those passionate about transforming raw materials into innovative, high-performance products. You'll gain the skills and knowledge needed to thrive in modern manufacturing environments, whether you're focused on improving processes, ensuring quality, or driving innovation in the design and production of goods. The course content will prepare you to move onto specific areas of Manufacturing Engineering at the next level of study, or to enter employment with the qualities and abilities necessary for roles that require personal responsibility and decision making. Throughout the course, you'll explore essential topics including manufacturing processes, robotics, automation, CAD/CAM systems, and materials science, while also understanding the principles of sustainable manufacturing practices. Hands-on experience with state-of-the-art machinery and software will ensure you are industry-ready, with practical skills in areas like CNC machining, additive manufacturing, and process optimization. Whether you're looking to enhance your career in an existing engineering role or start a new journey in the dynamic world of manufacturing, this HND offers the perfect combination of theoretical understanding and practical expertise to help you succeed.

What You Will Learn

ou will develop a rounded knowledge and understanding of Manufacturing Engineering

principles and skills to analyse complex problems relating to Engineering. By the end of this course, you will have a sound understanding of the principles in your area of specialism and how to apply those principles more widely in industry. The aim of the course is to:

- equip you with the skills, knowledge and understanding to achieve high performance in the engineering and manufacturing environment
- develop an enquiring mind with the ability and confidence to work across different engineering functions and to lead, manage, respond to change and tackle a range of complex engineering situations
- provide you with the core skills required for a range of careers in engineering, specifically those related to manufacturing engineering;
- offer a balance between employability skills and the knowledge essential for entrepreneurial, employment or academic ambitions
- develop your understanding of the major impact that new digital and software technologies have on the engineering environment;
- provide insight to manufacturing engineering operations and the opportunities and challenges presented by a global marketplace;
- equip you with knowledge and understanding of culturally diverse organisations, cross-cultural issues, diversity and values;
- allow flexible study to meet local and specialist needs.

Modules

Year 1:

- Engineering Design
- Engineering Maths
- Managing a Professional Engineering Project
- Production Engineering for Manufacture
- Computer Aided Design and Manufacture (CAD/CAM)
- Quality and Process Improvement
- Industry 4.0
- Industrial Robots

Year 2:

- Further Mathematics
- Distributed Control Systems
- Industrial Systems
- Manufacturing Systems Engineering
- Advanced Manufacturing Technology

- Sustainability

Entry Requirements

For the two-year HND programme, a BTEC Level 3 qualification in Engineering and a minimum of 80 UCAS points. GCSE Mathematics and English at Grade 4 minimum or equivalent.

Or

A minimum of 80 UCAS points including at least one Level 3 qualification in Maths, Physics or Computer Science. GCSE Mathematics and English at Grade 4 minimum or equivalent.

Or

An Access to Higher Education Certificate in an Engineering discipline awarded by an approved Further Education institution.

Work Experience

Although this course does not directly offer work experience, there are opportunities for you to undertake a work placement or work experience during your time studying on this course.

Progression

Successful completion of this programme can prepare you to move onto University and Higher Education study or employment in the Engineering industry.

Disclaimer: Our prospectus, college documents and website are simply here to offer a guide. We accept no liability for any inaccurate statements and are not responsible for any negative outcomes if you rely on an inaccurate statement. We reserve the right to withdraw any programmes or service at any time.