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T Level Design and Development for Engineering and Manufacturing - Design and Development: Mechanical Engineering

Location	Stockport College
Course Type	College 16-18
Department	T Level
Start Date	Tuesday 3rd September 2024
Course Code	SFP-EG3T-1400

Course Overview

These qualifications are being offered for the first time in 2022/23 and are a technical alternative to A Levels, offering a route to University or an Apprenticeship. The T level is equivalent to 3 A levels and carries the same UCAS points but with the advantage of a minimum 45 days engineering industry work experience and a significant practical element to the course covering either of the following occupational specialisms.

Mechanical Engineering
Electrical & Electronic Engineering

Course Requirements

Entry Requirements - GSCE grade 5 in Maths, English and Science and a further 2 GCSE's at grade 4. (if you don't meet the GCSE entry requirements there is an option of a 1 year Foundation T Level course

What You Will Learn

Embarking on the study of T-Level Engineering equips individuals with a multifaceted skill set, integral to navigating the intricacies of the modern engineering landscape. Proficiency in technical drawing and CAD (Computer-Aided Design) is foundational, enabling students to articulate their ideas visually and engage in the design process with precision and innovation.

Practical skills take centre stage, with hands-on experience in workshops and laboratories. T-Level Engineering students cultivate expertise in manufacturing processes, working with a variety of materials and tools. This fosters a deep understanding of how theoretical concepts manifest in real-world applications, a crucial aspect for future engineers.

Problem-solving and critical thinking are honed through project-based learning, where students tackle engineering challenges independently and collaboratively. Effective communication skills are also emphasised, acknowledging the importance of clear articulation and collaboration in the engineering field.

The benefits of T-Level Engineering extend beyond the classroom. Graduates are well-prepared for the workforce, possessing a blend of theoretical knowledge and practical skills highly sought after by employers. Additionally, T-Level qualifications offer a direct pathway to employment or higher education, ensuring a seamless transition for those eager to pursue further studies in engineering or dive into professional roles. The T-Level Engineering curriculum not only imparts technical expertise but also nurtures adaptable and resilient individuals ready to thrive in the dynamic engineering sector.

Assessment

Core units and employer set project are externally assessed exams.
Occupational specialisms are internally marked and externally moderated over an extended examination process.

Progression

Progression opportunities from a T-Level in engineering can vary depending on your specialisation within engineering and your career goals. T-Levels are designed to provide a strong foundation in technical and practical skills, making you well-prepared for further education and training. Here are some common progression routes you can consider:

Apprenticeships: Many students choose to continue their education through engineering apprenticeships. These programs combine on-the-job training with classroom instruction and can lead to higher-level qualifications like HNCs (Higher National Certificates) and HNDs (Higher National Diplomas).

Higher Education: You can pursue a higher education qualification, such as a bachelor's degree in engineering or a related field. T-Levels can provide you with the UCAS points needed for university entry. It's essential to research specific entry requirements for your chosen university and engineering program.

HNC and HND Programs: Higher National Certificates (HNC) and Higher National Diplomas (HND) are vocational qualifications that are often recognized by employers in the engineering sector. These can be pursued at colleges or universities and provide more in-depth knowledge and skills in your chosen engineering discipline.

Degree Apprenticeships: In some cases, you can work towards a bachelor's degree while gaining practical experience through a degree apprenticeship. These programs are offered by some employers and universities and allow you to earn a degree while working.

Professional Certifications and Licensing: Depending on your chosen engineering discipline, you may need to obtain professional certifications or licenses. For example, becoming a Chartered Engineer (CEng) through a professional engineering institution is a common goal for many engineers.

Master's Degrees: After completing a bachelor's degree, you can pursue a master's degree in engineering for more advanced study and specialization in your field.

Ph.D. Programs: If you are interested in research and development in engineering, you can consider pursuing a Ph.D. program to become a research scientist or engineer.

Short Courses and Continuing Education: Many engineering professionals continue their education through short courses, workshops, and certifications to stay updated on the latest technologies and industry trends.

Mandatory Units

Engineering Core subjects such as Maths, Science, Project Management, CAD, Quality
Employer led Projects
- Essential mathematics for engineering and manufacturing
- Essential science for engineering and manufacturing
- Materials and their properties
- Mechanical principles
- Electrical and electronic principles
- Mechatronics

Contact Details

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Disclaimer

Although every care has been taken to ensure that the information contained within this document is accurate, there may be changes to this programme and provision. We will endeavour to keep prospective and current students updated where appropriate and when the information becomes available.