

T Level in Engineering and Manufacturing: Design and Development

Why T Level Engineering?

T Level courses feature a technical qualification, which will include:

Year 1

- Core theory, concepts and skills for engineering centred on design, automation and manufacturing in electrical and mechanical engineering

Year 2 – Specialist pathway

- Design and Development

Every T Level includes an industry placement with an employer, focused on developing the practical and technical skills required for the occupation. These will last a minimum of 315 hours (approximately 45 days) but can last longer. Employers can offer industry placements on a block or day release – or a mix of these – and can discuss sharing part of the placement with another employer if necessary.

What can I expect?

The technical qualification is made up of two components all of which need to be successfully achieved to attain the technical qualification as well as the full T Level Technical Qualification in Design and Development for Engineering and Manufacturing (Level 3).

The common core component: The core content is designed to offer sufficient breadth of knowledge and skills for the learner to apply in a variety of contexts related to the engineering industry and those Occupational Specialisms linked to this T Level. The common core content is the building blocks of knowledge and skills that will give a learner a broad understanding of the industry and job roles. At the same time, it will develop the core skills they will need to apply when working within the industry.

Occupational Specialisms: Occupational Specialisms develop the knowledge, skills and behaviours necessary to achieve threshold competence in an occupation. Threshold competence is defined as when a learner's attainment against the knowledge, skills and behaviours is of a standard for them to enter the occupation and industry. They must also demonstrate the ability to achieve occupational competence over time with the correct support and training.

Which Stem Pathways can I follow?

Engineering Pathway

What enrichment opportunities will be offered?

Green Power

The 24+ Formula Greenpower challenge is about designing and building an electric racing car.

F1 in Schools

This is a multi-disciplinary technology challenge. Teams of students will utilise the state-of-the-art manufacturing

facilities at NUASt to design, analyse, manufacture, test and race miniature compressed air powered balsa wood F1 cars

What about the future?

T Levels in Engineering, on its own or linked with other subjects, can lead directly into design related university courses such as Product design, Industrial design, Architecture, Engineering, Furniture design, Project management, Manufacturing management, Interior design, Set design, Automotive design and Sports innovation. These include BA, BSc and BEng courses at many top universities, and also Foundation courses in Art and Design. This subject can also lead to Industry related employment or apprenticeships.

This course allows for progression to the appropriate Level 4, 5 or 6 Engineering qualification.

Alternatively, and with employment in a qualifying role, progression to a Higher or Degree Apprenticeship in the appropriate specialist pathway could be possible.

How will I be assessed?

Students will be assessed through a mixture of externally set exams and projects. These will bring together all the key theories and practical skills that the students learn throughout their time at College and on work placement.

Year 1

- Exam 1: Maths and Science
- Exam 2: Engineering in a Context
- Project: an Engineering project conducted in a controlled environment set over a week

Year 1 is graded A*-E.

Year 2

- Pathway specific project (either Mechanical or Electrical) – conducted in a controlled environment

Year 2 is graded Pass, Merit or Distinction.

Students who pass all the elements of their T Level will gain a nationally recognised certificate showing an overall grade of Pass, Merit or Distinction. It will also set out the details of what students have achieved on the course.

What do I need?

At least one of the following:

Design & Technology at Grade 5.

Engineering at Grade 5.

Maths at Grade 5.

Physics at Grade 5.