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T Level Maintenance Install and Repair for Engineering and Manufacturing Light/Electric Vehicles

Course Overview

Our T level in engineering manufacturing: maintenance, installation repair (light and electric vehicles) pops the bonnet on hybrid and EV design, technology and sustainability, putting you at the forefront of new engineering and preparing you for a career in a thriving market. This two-year deep dive into the EV world gives you two pathways. You can either take the core engineering and manufacturing route, which explores 19 modules from mechatronics to business and financial awareness in year one. Or you can go down the core maintenance, installation and repair pathway, which looks more at maintenance and repair, configuration and installation and decommissioning equipment. In year two, get involved in the specifics of car function and operation, both mechanical and electrical. Things get way more specialist now as you step closer to your EV career. Over the two years, you blend classroom learning with workplace experience in the world's best technical education systems. For a solid 80% of your T level, you're gaining all the technical skills, theory and knowledge you need. Then you step into industry on a 45-day placement to get hands-on experience at an organisation that suits your strengths and lifestyle. The placement may be undertaken in block release, day release, or a combination of both. We will support you to find the best placement to suit you.

What you will learn

In the first year, the course builds the foundations you need for a career in EV engineering and manufacturing, filling in any maths and science that passed you by at GCSE. Year one balances technical hands-on material with the business side of the EV industry: control systems, health and safety principles, stock and asset management and commercial awareness. From day one, you work towards your 45-day industry placement and the employer-led project. It gives you the opportunity to show your commitment to your future and willingness to apply everything you've learnt. Core engineering and manufacturing pathway: 1. Working within the engineering and manufacturing sectors 2. Engineering and manufacturing past, present and future 3. Engineering representations 4. Essential mathematics for engineering and manufacturing 5. Essential science for engineering and manufacturing 6. Materials and their properties 7. Mechanical principles 8. Electrical and electronic principles 9. Mechatronics 10. Engineering and manufacturing control systems 11. Recognised standards in engineering and manufacturing 12. Standard operating procedures (SOPs) 13. Health and safety principles and coverage 14. Business, commercial and financial awareness 15. Professional responsibilities, attitudes and behaviours 16. Stock and asset management 17. Quality assurance, control and improvement 18. Continuous improvement 19. Project and programme management Core maintenance, installation and repair pathway outline: 1. Engineering principles, practices and techniques for maintenance and repair 2. Engineering principles, practices and techniques for configuration and installation 3. Engineering principles, practices and techniques for decommissioning of equipment 6. Vehicle technology principles 7. Industrial work placement 8. Employer-set project

Now comfortable with the fundamentals, things get granular. And your EV specialism steps up a gear. You load your toolbox with the maintenance and repair skills you need for your incoming career. You get into the details of primary and auxiliary systems, investigating relevant, integrated mechanical, electrical and electronic components and technologies. You get the time and space to develop and apply your technical understanding and maintenance and repair skills, so you're ready when you step into your first job. Year two will prepare you to impress your employer from day one. 1. Analyse requirements, specifications and technical information so you can successfully maintain, install, service and repair vehicles. 2. Plan and prepare EV maintenance, installation, servicing and repair, confident in requirements and context. 3. Use appropriate techniques and procedures for quality outcomes and solutions. 4. Review and evaluate EV workplace systems and processes, demonstrating commercial awareness and accountability. 5. Communicate vehicles maintenance, installation, servicing and repair information, proposals and solutions, producing, recording and explaining relevant technical information. Light and electric vehicles specialism pathway: 1. Engines and motors 2. Drive train 3. Transmission 4. Chassis 5. Steering and suspension 6. Auxiliary systems 7. Electric and hybrid vehicles 8. Engineering principles 9. Materials science 10. Function and operation of mechanical components and systems 11. Function and operation of electrical components and systems 12. Function and operation of electronic components and systems.

Entry Requirements

T levels are for individuals who are aged 16-18 on or before the 31 August 2024. Standard entry to this course requires one reference. It is desirable that you can demonstrate a minimum of 90% attendance at your last place of work or study. You will also need a GCSE grade 5 in maths, together with 3 further GCSEs at grade 4 including English and science. If you were previously studying at the college, you will need to have attained a Level 2 Diploma in Engineering, plus GCSE English grade 4 and Maths at grade 5. When you enrol, you will be placed on a 6-week Induction period. During this time, we will monitor your attendance, attainment and attitude toward study. At the end of the 6 weeks, we will talk to you about whether you should continue with the T level or whether an alternative course would be better suited to you. If you don't meet these entry requirements but want to start on your chosen career path, then you can apply for the Level 2 EAL Diploma in Engineering Operations during which you will have the opportunity to resit Maths/English GCSE to obtain the necessary entry grades.

How you will be assessed

Course Details

Course Code P00100

Start Date 08/09/2025

Study Hours Full Time

Duration 2 years

Campus Abbey Park Campus

Level 3

Apply Here

To monitor your practical knowledge and skills, the course has regular tasks and assignments. There are also several formal assessments during the two years: external exams, controlled assessments, practical summary assignments and an employer-led set project. Together, the assessments generate an overall grade of pass, merit, distinction or distinction*. At the end of your T level, you receive a nationally recognised certificate with a clear breakdown of your achievements. The T level can be worth up to 168 UCAS points.

Course Fees

You are expected to obtain personal protective equipment (PPE) to be worn during all practical sessions. During the Induction period, you will be allocated a locker to store your PPE. Basic requirements are steel toe cap safety boots, and plain navy or black overalls (boiler suit style only). You can purchase your PPE from wherever you wish, however during enrolment you will be given details of some local companies who supply many of our students. The cost of the required PPE would be expected to cost between £30 and £45. You will require some basic stationary (scientific calculator, pens, pencils, ruler, ring binder, page dividers). You will be given a course Equipment List during enrolment, detailing specifics.

Course Progession

Equivalent to three A levels, this T level sets you up for a career in electrical and electronic design and development in the engineering industry, giving you a strong start in a highly sought-after career. You could step into an electrical or electronics design engineer position or go for systems development, measurement and testing – anything involving electrical and electronic systems is open to you from here. It also arms you with the knowledge you need to move into a higher level apprenticeship or a course of study in Higher Education, such as Higher National Diplomas (HNDs) and Degree level courses Have a chat with our independent careers advisors to work out your next step. They have all the information, advice and guidance you need to spark up your career.

What Happens Next

Apply online via the college website, or if your school uses the Positive Steps @16 (PS16) application system please apply through this and speak to your careers advisor if you are unsure. You will need details of your qualifications, a reference, and a personal statement to complete your application. Once your application has been successfully processed, you will be sent a conditional offer and be invited to a welcome event at the College to meet your tutors, learn more about your chosen course of study and tour the facilities. You will then need to confirm your acceptance of the course offered to you.