

L3 APPRENTICESHIP

ENGINEERING TECHNICIAN (MECHATRONICS MAINTENANCE TECHNICIAN)

Overview

Engineering Technicians in the Aerospace, Aviation, Automotive, Maritime Defence and wider Advanced Manufacturing and Engineering Sector are predominantly involved in highly skilled, complex work and must, as a minimum be able to:

- Apply safe systems of working
- Make a technical contribution to either the design, development, quality assurance, manufacture, installation, commissioning, decommissioning, operation or maintenance of products, equipment, systems, processes or services
- Apply proven techniques and procedures to solve engineering/manufacturing problems
- Demonstrate effective interpersonal skills in communicating both technical and non-technical information
- Have a commitment to continued professional development

Engineering Technicians take responsibility for the quality and accuracy of the work they undertake within the limits of their personal authority. They also need to be able to demonstrate a core set of behaviours in order to be competent in their job role, complement wider business strategy and development. This will enable them to support their long-term career development.

Engineered and manufactured products and systems that Engineering Technicians work on could involve mechanical, electrical, electronic, electromechanical and fluid power components/systems.

Entry requirements*

Grade 4 GCSE (C) or above in English and Maths

Who is the course for?

Mechatronics Maintenance Technicians ensure that plant and equipment perform to the required standard to facilitate production targets regarding Safety, Quality, Delivery and Cost within High Value Manufacturing environments. Typically, the work would cover a broad range of activities include installation, testing, fault finding and the on-going planned maintenance of complex automated equipment. This requires the application of a complex blend of skills, knowledge and occupational behaviours across the electrical, electronic, mechanical, fluid power and control systems disciplines.

Programme content

KEY INFORMATION

Typical Duration:
42 Months + 3 months EPA

Taught Days:
One day every week term time only

Delivery Location:
Truro

Funding value:
£26,000

(£1,300 employer contribution if required)

Knowledge

- Understand mathematical techniques, formula and calculations in a mechatronics maintenance environment and the type of equipment being maintained.
- Understand mechanical, electrical, electronic, fluid power and process control principles in a mechatronics maintenance environment.
- Understand how equipment being maintained functions and operating parameters in individual components and how they interact.
- Understand fault diagnostic methods, techniques and equipment used when maintaining equipment and systems.
- Understand condition monitoring methods and equipment used and understand how the information gained.
- Supports the planning of maintenance activities.
- Understand how to minimise machinery downtime by implementing planned preventative maintenance programmes.

Skills

- Read and interpret relevant data and documentation used to maintain components, equipment and systems.
- Carry out condition monitoring of plant and equipment.
- Carry out planned maintenance activities on plant and equipment.
- Carrying out complex fault diagnosis and repair activities on high technology engineered systems such as:
 - Maintaining mechanical equipment
 - Maintaining fluid & pneumatic power equipment
 - Maintaining electrical & electronic equipment
 - Maintaining process control equipment
- Carrying out confirmation testing and subsequent smooth hand over of equipment & plant support the installation, testing and commissioning of equipment (where applicable).
- Contribute to the business by identifying possible opportunities for improving working practices, processes and/or procedures.

Behaviours

- Personal responsibility, resilience and ethics. Comply with health and safety guidance and procedures, be disciplined and have a responsible approach to risk, always work diligently, accept responsibility for managing time and workload and stay motivated and committed when facing challenges. Comply with any organisational policies/codes of conduct in relation to ethical compliance.
- Work effectively in teams. Integrate with the team, support other people, consider implications of their actions on other people and the business.
- Effective communication and interpersonal skills.
- Focus on quality and problem solving.
- Continuous personal development. Reflect on skills, knowledge and behaviours and seeks opportunities to develop, adapt to different situations, environments or technologies and have a positive attitude to feedback and advice.

Gateway

- Foundation Phase



- A Development Phase
- An End Point Assessment

In order to optimise success, candidates will typically have 4 GCSEs at Grade C/4 or equivalent, including Mathematics, English and a Science.

End point assessment

EPA methods

- An Occupational Competence Validation Interview (Viva) drawing from a portfolio of evidence of occupational competence.
- Professional competence assessment undertaken by independent assessor(s) from the relevant PEI/MIAA [using the Performance Indicators Recording Form].
- Final employer endorsement of occupational and professional competence and overall completion of the apprenticeship.

Contact information

For further information, please call our Business Relations Team on 01872 242711 or email apprenticeships@truro-penwith.ac.uk

* A guide to GCSE grading and Functional Skills

GCSE Grading	
New Grading Structure	Old Grading Structure
9	A*
8	
7	A
6	
5	B
4	C
3	D
2	E
1	F
	G
U	U

Functional Skills are equivalent to GCSE's, the table below shows the comparison

Entry Level 1	GCSE below G or Level 1
Level 1	GCSE D-G or level 1-3
Level 2	GCSE A* - C or level 4-9