Course Information

CITY OF WOLVERHAMPTON COLLEGE

Engineering Manufacturing Technician Apprenticeship Level 4

Study Mode: Full Time, Work Based Learning

Is this course right for me?

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Engineering Manufacturing Technicians work across sectors such as automotive, aerospace, marine and materials production, supporting engineers in developing, improving, and testing products and processes. Their role focuses on ensuring products meet quality, cost and delivery requirements while maintaining safety and compliance.

They collect and analyse data, solve problems, and produce technical documentation that supports manufacturing, testing and maintenance activities. The role involves working across office and production environments, collaborating with engineers, production teams, suppliers and customers.

Technicians apply technical judgement, contribute to continuous improvement, and support efficient production. Typical job titles include manufacturing engineer, quality engineer, production engineer and process engineer.

This apprenticeship offers two pathways — **Electrical/Electronic Engineering** or **Mechanical Engineering** — each combining core engineering modules with specialist technical units.

Entry Requirements

Individual employers will set the selection criteria for their apprenticeships.

In order to optimise success, candidates will typically havefive GCSE’s at Grade C Grade 4/5 in the new numerical GCSE grading system) or above, including maths*, English and a science, technology or engineering-related subject, or 90+ credits in an Engineering BTEC at level 3.

*As further guidance, the level of maths has an advisory GCSE level of grade B (Grade 5/6 in the new numerical GCSE grading system)

What will I learn?

- Deliver safe, compliant production to plan, following SOPs, H&S and regulatory standards.
- Plan and schedule work; coordinate stakeholders; manage SLAs, documentation and timelines.
- Collect and analyse data to produce reports, KPIs and costings; support quotes and budgeting.
- Support NPI and engineering changes, including testing, commissioning and gate reviews.
- Improve processes using lean (5S, Kaizen, Six Sigma), time/motion, line balancing and flow.
- Solve quality/manufacturing issues with RCA, PFMEA, PPS; implement corrective/preventive actions.
- Manage internal/supplier quality notifications to closure.
- Control assets, materials, stock and document/configuration management.
- Read drawings/specs/BOMs; use CAD, analytics and databases to create/update documentation.
- Apply core engineering principles and digital/Industry 4.0 tools across methods, materials and production modes.
- Maintain quality and compliance using measurement/testing (incl. NDT/DT) and QMS standards (e.g., ISO 9001/AS9100/14001).
- Safety-first; systematic, proactive and transparent.
- Accountable, resilient and responsible in managing risk.
- Champions new technologies and continuous professional development.
- Builds ethical, professional relationships; communicates and collaborates effectively.
- Acts with integrity, respect and inclusivity; customer- and quality-focused.

What skills will I gain?

Apprentices will gain the following skills:

- Read and extract relevant engineering and manufacturing related data and information (such as workplans/project plans ,schedules, drawings, specifications, production data, quality reports, costing data, statistical information) drawing accurate conclusions and making informed decisions.
- Use project management tools, such as Strengths, Weaknesses, Opportunities, Threats (SWOT), stakeholder matrices, risk mapping, radar chart and summary risk profiles
- Use problem solving tools such as Root Cause Analysis (RCA) Process Failure Modes Effects Analysis (PFMEA), Fishbone, Practical Problem Solving (PPS) and Advanced Product Quality Planning (APQP).
- Analyse and interpret data and information in order to generate manufacturing engineering documentation such as Parts Per Million (PPM) quality adherence, cost analysis and test data.
- Communicate using the appropriate method for the audience such as, formal and informal presentations, written reports, verbal, electronic, social media and incorporating relevant and appropriate data and/or metrics.
- Use the approved process and quality compliance procedure to create or amend engineering and/or manufacturing documentation.
- Use lean tools and techniques, such as Six Sigma, 8 Wastes, Workplace organisation such as 5S’s (sort, set in order, shine, standardise and sustain), Kaizen and Poka-Yoke (Error proofing),
- Apply documentation control processes and procedures such as format, location, access, authorisation.
- Use financial planning, recording and review processes and documentation such as departmental budgets, estimating, cost control, cost forecasting, and investment appraisal
- Use computer based software system/packages such as Computer Aided Design (CAD), Data Analytics and Databases.

How will I be assessed?

Throughout the programme the apprentice will receive expert training from highly qualified staff. A qualified assessor will provide an induction and regular workplace assessments.

What can I do next?

Apprentices who successfully complete this qualification can progress to:

- Employment in the industry in an engineering maintenance-related role
- Higher National Diploma (HND) in Engineering
- Relevant undergraduate degree

Delivery

Location:

Start Date:

Day:

Time:

Course Fee:

Course Code: AP0100

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