

Level 3 Engineering
Technician Standard

Pathway: Technical
Support Technician



Role profile

Technical Support Technicians, work as part of a team to provide technical support and expertise for all areas of the Engineering and Manufacturing function including communications software, test, analysis tools, measurement, off line programming, process control, performance and continuous improvement solutions, capacity planning, production scheduling/planning, product technical applications and capability, technical sales and marketing support, product

development and innovation, engineering drawing, purchasing and/or supply of goods or services for engineering activities, quality control, inspection and e-commerce technologies as required. Technical Support Technicians will be expected to:

- work with minimum supervision, taking responsibility for the quality, accuracy and timely delivery of the work they undertake.

- be proactive in finding solutions to problems and identifying areas for improving the business.
- Delivery: Delivered over 42 months (plus) up to 3 months for End Point Assessment (EPA) completion.
- Delivery method: Day release to LEMA Academy for classroom and workshop training and assessment plus work-based assessment. Apprentices receive a work-based progress review every 8 weeks.

Technical Support Technician Pathway – The Journey:

| | Phase 1 | Phase 2 | Phase 3 | Phase 4 | Phase 5 |
|----------------------------------|--|---|---|---|---|
| | Work-based progress reviews every 8 weeks for programme duration | | | | |
| Technical Support Pathway | EAL Level 2 Diploma in Advanced Manufacturing Engineering <ul style="list-style-type: none"> • Duration: 34 weeks • Frequency: 2 days per week in Academy • Total days: 68 | EAL Level 2 Diploma in Advanced Manufacturing Engineering – Tech Support Specialist Units <ul style="list-style-type: none"> • Duration: 26 weeks • Frequency: 1 day per week in Academy • Total No of days: 26 | EAL Level 3 Diploma in Advanced Manufacturing Engineering <ul style="list-style-type: none"> • Duration: 48 weeks • Frequency: 1 day per week in Academy • Total number of days :48 | EAL Level 3 Diploma in Advanced Manufacturing and Engineering – Technical Support Technician <ul style="list-style-type: none"> • Duration: 52 weeks • Frequency: 1 day per month in Academy plus monthly workplace visits • Total number of days: 12 Academy days plus 12 workplace visits | EPA Preparation <ul style="list-style-type: none"> • Duration: 3 months • Frequency: 2 days per month in month 1 & 2, 1 block week in month 3. • Frequency: 2 days per month in month 1 & 2, 1 block week in month 3. |



Other Leaping Men are...



Level 3 Engineering Technician Standard

Pathway: Technical Support Technician

Units



| Programme Phase | Content |
|--|---|
| Phase 1 | EAL Level 2 Diploma in Advanced Manufacturing Engineering (Foundation Competence) 601/7179/0A |
| | Mandatory Units: |
| | 1. Complying with Statutory regulations and organisational safety requirements |
| | 2. Working efficiently and effectively in an engineering environment |
| | 3. Using and communicating technical information |
| | 4. Conducting business improvement activities |
| | 5. Producing components using hand fitting techniques |
| | 6. Producing Mechanical assemblies |
| Phase 2 | EAL Level 2 Diploma in Advanced Manufacturing Engineering Technical Support Technician Specialist Pathway |
| | Units: |
| | 1. Using computer software packages to assist with engineering activities |
| | 2. Producing engineering project plans |
| Phase 3 | EAL Level 3 Diploma in Advanced Manufacturing Engineering (Development Knowledge) 603/1354/7 |
| | 1. Health and Safety in the Engineering Workplace |
| | 2. Communications for Engineering Technicians |
| | 3. Mathematics for Engineering Technicians |
| | 4. Engineering Project |
| | 5. Mechanical Principles of Engineering systems |
| | 6. Maintenance of Mechanical systems |
| | 7. Mechanical measurement and Inspection techniques |
| | 8. Monitoring and fault Diagnosis of Engineering systems |
| | 9. Computer aided design (CAD) techniques |
| | 10. Electrical and Electronic Principles in Engineering |
| Phase 4 | EAL Level 3 Diploma in Advanced Manufacturing and Engineering - Technical Support Technician (Development Competence) 603/2290/1 |
| | Mandatory Units |
| | 1. Complying with statutory regulations and organizational safety requirements |
| | 2. Using and interpreting engineering data and documentation |
| | 3. Working efficiently and effectively in advanced manufacturing and engineering |
| | Optional Pathways; |
| | A) Engineering drawing (one unit from): |
| | 1. Producing mechanical engineering drawings |
| | 2. Producing engineering drawings/models using 3D CAD |
| | 3. Producing electrical engineering drawings using CAD |
| | 4. Producing electronic engineering drawings using computer aided techniques |
| | 5. Producing engineering systems/services drawings using computer aided techniques |
| | 6. Producing fluid power engineering drawings using computer aided techniques |
| | 7. Producing fabrication/structural engineering drawings using computer aided techniques |
| | B) Quality Control (one unit from): |
| | 1. Inspecting mechanical products |
| | 2. Inspecting components using co-ordinate measuring machines (CMM) |
| | 3. Inspecting fabricated components and structures |
| | 4. Carrying out visual inspection of welded fabrications |
| | 5. Inspecting and testing electrical products |
| 6. Inspecting and testing electronic products | |
| 7. Checking and calibrating mechanical inspection equipment | |
| 8. Checking and calibrating electrical and electronic test equipment | |
| 9. Checking and calibrating process control instrumentation | |



| Programme Phase | Content |
|--|---|
| Phase 4 (continued) | C) Computer Control Programming (one unit from 1 or 2 plus one unit from 3 to 13) |
| | 1. Providing operational support for computer control programs |
| | 2. Loading and proving computer control programs |
| | 3. Producing operating programs for co-ordinate measuring machines (CMM) |
| | 4. Producing off-line programs for programmable logic controller equipment |
| | 5. Producing off-line programs for CNC laser profiling machines |
| | 6. Producing off-line programs for CNC fabrication machines |
| | 7. Producing off-line programs for CNC turning machines |
| | 8. Producing off-line programs for CNC milling machines |
| | 9. Producing off-line programs for CNC grinding machines |
| | 10. Producing off-line programs for CNC gear cutting machines |
| | 11. Producing off-line programs for CNC electro-discharge machining |
| | 12. Producing off-line programs for CNC boring machines |
| | 13. Producing off-line programs for CNC machining centres |
| | D) Operational Technical Support (unit 1 plus three more units one of which must be from group A): |
| | 1. Resolving engineering or manufacturing support problems |
| | Group A units: |
| | 1. Planning engineering activities 378 M/615/4054 |
| | 2. Implementing engineering activities |
| | 3. Monitoring engineering activities |
| | 4. Producing technical information for engineering activities |
| | 5. Obtaining resources for engineering activities |
| | 6. Obtaining and controlling materials for engineering activities |
| | 7. Providing technical sales and marketing support for engineering activities |
| | 8. Implementing quality control systems and procedures in an engineering environment |
| | 9. Scheduling engineering activities |
| | 10. Determining engineering requirements for the supply of products or services |
| | 11. Carrying out condition monitoring of plant and equipment |
| | 12. Carrying out fault diagnosis on engineering plant and equipment |
| | 13. Supporting logistics operations in an engineering manufacturing environment |
| | Group B units: |
| | 1. Providing technical advice and guidance on engineering activities |
| | 2. Carrying out project management of engineering activities |
| | 3. Developing and maintaining effective customer relationships |
| | 4. Handing over and exchanging responsibility for control of engineering activities |
| | 5. Carrying out health and safety risk assessments on engineering activities |
| | 6. Producing contractual arrangements to supply or procure goods or services for engineering activities |
| 7. Using and maintaining business procedures and protocols in an engineering environment | |
| Phase 5 | End Point Assessment |
| | Employer led portfolio based Occupational Competence Validation Interview (Viva) |
| | Professional Competence Engtech Application |



Other Leaping Men are...



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