



## Course

# Level 2 Lean Manufacturing Operative Inspection/Quality Assurance Apprenticeship standard



Course duration:  
12-18 months

## Summary

### Knowledge

- Health and safety
- Environmental
- Production
- Lean operations
- Quality control
- Problem solving
- Continuous improvement
- Communication
- Work place organisation

### Skills

- Health and safety
- Environmental
- Production
- Lean operations
- Quality control
- Problem solving
- Continuous improvement
- Communication
- Work place organisation

### Behaviours

- Team-working
- Professionalism
- Continuous development
- Adaptability

## Learn more about the responsibility of carrying out manufacturing activities on one or more products at the same time, in a fast paced environment.

When you're working as a lean manufacturing operative in a inspection/quality assurance role, you will need to carry out your work safely and meeting exacting quality standards in a fast paced and efficient processing environment.

### Who is it for?

The UK manufacturing industry is highly regarded worldwide for its innovation and excellence. If you have a logical mind, enjoy the detail of processes and thrive on a challenge, then working as an apprentice in this fast paced environment is for you.

### What will you learn?

You will learn about manufacturing processes and standard operating procedures to help you prepare, control, contribute to and complete manufacturing operations. With this knowledge you will develop and support improvement in the manufacturing operation using continuous improvement methods, kaizen tools, process visualisation using lean principles and problem solving tools and techniques. You will develop into a multi-skilled operator with a specialist knowledge in carrying out inspection and testing activities and ensuring the high quality of products and materials.

Alongside this, and following an initial assessment, we will work with you, your manager and mentor to create an individual training plan. This will include skills development such as reading, writing, speaking, listening and communication in English, as well as maths, in preparation for Levels 1 and 2 Functional Skills. There will also be activities and learning to improve your personal soft skills.

### What comes next?

On completion of your apprenticeship, you will receive a Level 2 Diploma in Manufacturing (certified by EAL).

## Knowledge

Area	Learning aims and development
<b>Health and safety</b>	<ul style="list-style-type: none"> <li>Relevant statutory, organisational and health and safety regulations relating to lean manufacturing operations and safe practices</li> </ul>
<b>Environmental</b>	<ul style="list-style-type: none"> <li>Compliance procedures/systems in line with regulatory requirements e.g. ISO 14001 or other relevant environmental standards</li> <li>Specific safe working practices and environmental regulations that need to be observed</li> </ul>
<b>Production</b>	<ul style="list-style-type: none"> <li>The individual roles and responsibilities within the organisation and the flexibility required to deliver products to meet customers costs/delivery targets/requirements e.g. Just in time (JIT)</li> </ul>
<b>Lean manufacturing operations</b>	<ul style="list-style-type: none"> <li>Manufacturing standard operation procedures (SOPs) adherence and development of lean processes</li> </ul>
<b>Quality control</b>	<ul style="list-style-type: none"> <li>Process equipment monitoring, data collection, error proofing and operating procedures e.g. ISO 9002 or other relevant quality standards</li> <li>The correct methods of handling and storing the samples</li> <li>Where to obtain the necessary job instructions, inspection/quality procedures and product specification that are used and how to interpret them</li> <li>How to identify which samples, products and materials do not meet the quality requirements</li> <li>Procedures for the handling and segregation of defect components</li> </ul>
<b>Problem solving</b>	<ul style="list-style-type: none"> <li>The tools and methods of effective problem solving using data, reports and documents to resolve production related issues e.g. A3 report, graphs, matrices and escalate concerns</li> </ul>
<b>Continuous improvement</b>	<ul style="list-style-type: none"> <li>How to study and identify ways to improve the safety, quality, cost or process efficiency using lean manufacturing tools e.g. kaizen</li> </ul>
<b>Communication</b>	<ul style="list-style-type: none"> <li>How to share information using a range of methods within the manufacturing environment e.g. oral, written, electronic, information boards, visual displays</li> </ul>
<b>Work place organisation</b>	<ul style="list-style-type: none"> <li>How to maintain a safe and efficient work site through work place organisation e.g. 5s and process ownership</li> </ul>

## Skills

Area	Learning aims and development
<b>Health and safety</b>	<ul style="list-style-type: none"> <li>• Work safely at all times, complying with health and safety legislation, regulations, and other relevant guidelines</li> <li>• Identifying risks within your processes and support/carry out countermeasure activities to improve safe working</li> <li>• Manage tooling, equipment and materials daily in-line with supplier standards e.g. COSHH (Control of Substances Hazardous to Health)</li> </ul>
<b>Environmental</b>	<ul style="list-style-type: none"> <li>• Comply with environmental procedures and systems and contribute to the achievement of specific standards e.g. ISO 14001 or other relevant environmental standards and use the 4R's (Reduce, Re-use, Recycle, Recover) where possible</li> </ul>
<b>Production</b>	<ul style="list-style-type: none"> <li>• Demonstrate your ability to carry out your role effectively, efficiently and flexibly maintaining lean manufacturing principles to meet customer's demands e.g. JIT</li> </ul>
<b>Lean manufacturing operations</b>	<ul style="list-style-type: none"> <li>• Demonstrate your skill and knowledge following SOPs and build your versatility across a number of processes and process areas</li> <li>• Select and use appropriate tools, equipment and materials to carry out the manufacturing operation</li> </ul>
<b>Quality control</b>	<ul style="list-style-type: none"> <li>• Demonstrate appropriate process documentation control</li> <li>• Accurately complete check sheets, monitoring process and equipment data efficiently and legibly using the correct terminology required to meet the quality standard e.g. ISO 9002</li> <li>• Obtain and follow the correct job instructions, inspection/quality procedures and product specifications in accordance with time constraints and the roles and responsibilities identified for the inspection/quality assurance activity</li> <li>• Collect production samples at the required frequency in accordance with inspection specification and operating procedures</li> <li>• Carry out inspection and testing activities using the specified methods and equipment</li> <li>• Prepare, handle, transfer and store samples safely and correctly in accordance with quality control procedures</li> <li>• Accurately interpret the data/results gained from the inspection and testing procedures being used</li> <li>• Record and report inspection findings to the relevant person</li> </ul>

## Skills (cont'd)

Area	Learning aims and development
<b>Problem solving</b>	<ul style="list-style-type: none"> <li>Demonstrate your ability to identify and resolve problems within the lean manufacturing environment, using effective problem solving tools and techniques</li> <li>Manage problems that may occur during the manufacturing process within the limits of your responsibility and escalate as appropriate</li> </ul>
<b>Continuous improvement</b>	<ul style="list-style-type: none"> <li>Generate ideas and contribute to process improvement activities individually or as part of a team through fact finding and analysis to improve the safety, environment, quality, cost or production process</li> <li>Identify and eliminate the 7 wastes (defects, over production, transportation, waiting, inventory, motion and processing)</li> </ul>
<b>Communication</b>	<ul style="list-style-type: none"> <li>Demonstrate communication skills which include oral, written, electronic (PC), information boards or visual displays to effectively share information</li> </ul>
<b>Work place organisation</b>	<ul style="list-style-type: none"> <li>Maintain and monitor the work site efficiently and effectively at all times using the elements of sifting, sorting, sweeping, spick &amp; span (5's) within the lean manufacturing environment</li> </ul>

## Behaviours

Area	Learning aims and development
<b>Team working</b>	<ul style="list-style-type: none"> <li>Integrate within the team and support others</li> <li>Show respect for others, having regard for diversity and equality</li> </ul>
<b>Professionalism</b>	<ul style="list-style-type: none"> <li>Be punctual, reliable and take responsibility for your own actions</li> <li>Demonstrate a positive and respectful attitude</li> <li>Listen to other people's opinions</li> <li>Be an open and honest communicator</li> </ul>
<b>Continuous development</b>	<ul style="list-style-type: none"> <li>Seek opportunities to develop and adapt to different situations, environments or technologies</li> <li>Follow instructions and guidance and demonstrate attention to detail</li> </ul>
<b>Adaptability</b>	<ul style="list-style-type: none"> <li>Respond positively to change in the working environment</li> <li>Work independently and effectively in challenging situations</li> <li>Maintain quality of work under pressure</li> </ul>

## Additional skills

As well as the core curriculum, you will develop a number of additional skills throughout the course of your apprenticeship:

### NCFE Functional Skills

You will work on developing positivity and confidence in the use of maths and English skills in real world and employment-based situations.

#### Maths

Through Levels 1 and 2 Functional Skills qualifications you will demonstrate a sound grasp of maths skills at the appropriate level and the ability to apply mathematical thinking effectively to solve problems in the workplace and in other real-life situations.

#### English

Through Levels 1 and 2 Functional Skills qualifications, you will demonstrate the ability at an appropriate level to read, write, speak, listen and communicate in English, and to apply these skills effectively to a range of purposes in the workplace and in other real-life situations.

### British values

As part of your apprenticeship, we will discuss five key values and their impact and importance in the workplace. These will be democracy, the rule of law, individual liberty, mutual respect and tolerance of those of different faiths and beliefs.

### Soft skills development

Personal Learning and Thinking Skills (PLTS) are generic skills that are essential to life, learning and work. Developing these will make a significant impact on your ability to contribute confidently both within and outside of your working environment. PLTS include independent enquiry, creative thinking, reflection, team working, self-management and effective participation.

### PREVENT

PREVENT is part of the government's CONTEST strategy of which education is a fundamental part. The aim of the strategy is "to reduce the risk to the UK and its interests overseas from terrorism so that people can go about their lives freely and with confidence." CONTEST is split into four work-streams that are known within the counter-terrorism community as the 'four Ps': Prevent, Pursue, Protect, and Prepare.



#### Plan

We take into consideration your skills at each stage of the process, planning the learning and follow-up activities.

#### Do

You undertake the learning and activities that have been planned.

#### Check

We check your learning using a combination of assignments, discussions and observations of workplace activities, ensuring that skills, knowledge and behaviours are embedded and being practised.

#### Act

If areas of further learning are identified, reinforcement training is planned in and provided.