

Manufacturing Manager Integrated Degree Apprenticeship Standard

Section 1: Occupational Profile

The occupation is found in manufacturing sectors including food and drink, consumer goods, pharmaceuticals, chemicals, automotive and aeronautical.

The broad purpose of the occupation is to oversee the manufacturing process to make sure that performance output meets customer expectations and is cost-effective. This will include planning manufacturing schedules, monitoring operations and quality assurance.

Manufacturing Managers may work for organisations of all sizes, overseeing an entire manufacturing plant or a specific area of production; producing one or multiple products, products of high or low value, bespoke items or items produced at scale. Production may be within a fast-paced environment, for example production of sandwiches with a short shelf life. Products may be sold to consumers in the UK and/or exported abroad. The manufacturing industry is increasing becoming more automated, making it an innovative environment to work in.

Manufacturing managers will spend time in the production area and an office. Manufacturing managers may be required to work shifts over a 24-hour basis, weekend shifts and be on call to deal with emergencies.

In their daily work, an employee in this occupation interacts with manufacturing personnel and managers from other departments, for example, commercial, marketing, research and design, technical, quality, human resources and engineering. They may also interact with customers.

An employee in this occupation will be responsible for management of manufacturing personnel, budgets, manufacturing equipment and the manufacturing facility – quantity and value of which will vary depending on the size and type of manufacturing. They are ultimately responsible for the manufacture of safe goods in a safe environment. They will typically report to a senior manager, for example the Operations Director or General Manager.

Manufacturing managers will complete core duties and duties relating to one option specific to the manufacturing sector.

Typical job titles include Factory Manager, Operations Manager, Production Manager, Manufacturing Manager, Business Unit Manager and Site General Manager.

Typical core duties:

- D1. Pre-production planning, including staffing for multi-disciplinary teams, raw materials and equipment to meet manufacturing goals
- D2. Managing production to ensure achievement of the overall operating and financial targets ensuring timely onward distribution to customers
- D3. Overseeing post-production quality checks and monitoring results
- D4. Providing reports to senior managers
- D5. Hiring and training of core employees and agency workers
- D6. Monitoring workers to ensure they meet performance and safety requirements
- D7. Reviewing production costs to ensure that gross margin percentage is maintained
- D8. Supporting commercial/procurement team in negotiations with customers and suppliers
- D9. Ensuring that Health and Safety (H&S) is managed effectively in their area of responsibility, by means of internal audits, toolkits, safe systems of work, risk assessments and support from managers responsible for H&S
- D10. Ensuring that environmental policy and procedures are implemented
- D11. Asset management; planning preventative maintenance and providing a business case for capital expenditure
- D12. Liaising and working in partnership with Union representatives

Typical food and drink option duties:

- FDD1. Ensuring hygienic design of food manufacturing machinery and premises, in conjunction with engineers and food technologists
- FDD2. Ensuring food safety standards are maintained during manufacture to meet customer and regulatory requirements
- FDD3. Monitoring cleaning operations to maintain hygiene standards within food manufacturing facility
- FDD4. Leading third party food safety audits, for example food standards agency, retailer, British Retail Consortium (BRC)
- FDD5. Developing and agreeing a project plan with the Planning Manager on acceptance of customer order; responding to seasonal needs and shelf life requirements
- FDD6. Creating and maintaining a positive food safety culture with consumer safety focus
- FDD7. Participating in quality checks including taste panels

Section 2: Requirements: Knowledge, Skills and Behaviours

Manufacturing Managers have the following core knowledge and understanding:

- K1. **Product and Employment Legislation** – including Equal Opportunities, Employment Rights Act, Modern Slavery, Competition Law, Bribery and Corruption
- K2. **Product Supply Chain** – the relationship between the supplier and customer; how to accurately forecast and schedule product demand; the impact of fraud and how traceability systems can be used to identify criminal activity
- K3. **Quality Assurance** – Total Quality Management, how product safety and product safety management systems are used to meet legal requirements and codes of practice to produce safe products of the required specification
- K4. **Principles of Processing Controls and Factory Design** – construction of factories and equipment; linear workflow
- K5. **Principles of Engineering** – the impact of engineering on safety, compliance and production
- K6. **Health & Safety** – Health & Safety at Work Act, health and safety risks and risk assessment practices, Control of Substances Hazardous to Health (COSHH), Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
- K7. **Environmental** – environmental controls, Safe Disposal of Waste regulations, recycling, emissions (noise and smell)
- K8. **Markets** – domestic and international dimensions which impact on the manufacture of goods, for example exchange rates, border controls, movement of goods
- K9. **Business and Financial Awareness** – organisation 'big picture'; how key functions interact; key business systems, performance data, financial statements, principles of costing and budgeting
- K10. **Managing People and Change** – leadership and management tools, including delegation, motivation, union consultation and negotiation, communication, persuading and influencing, change management, time management and leadership skills
- K11. **Customer Relationship Management** – tools and techniques, including product management techniques, customer requirements/value perception, customer segmentation, customer insights, complaint management in order to achieve customer excellence and ensure adherence to customer/industry standards
- K12. **Critical Thinking and Analysis** – how to research, evaluate and present business information; utilising statistical/analytical skills to interpret primary/complex data which will include a diverse range from overall equipment efficiency and financial key performance indicators to customer complaints
- K13. **Problem solving techniques** – for example mind mapping, root cause analysis, six thinking hats
- K14. **Continuous Improvement (CI) techniques** – 6 Sigma, LEAN, Kaizen
- K15. **Crisis Management and Continuity Planning** – how to lead and manage site incidents

Food & Drink option managers have the following knowledge:

- FDK1. **Food Safety** – allergen management and labelling; food safety standards: Food Safety Act, Animal Welfare Standards, European Food Regulations, Food Hygiene England Regulations; contamination and cross contamination of food by physical, chemical, micro-biological and allergenic materials and substances
- FDK2. **Environment** – food waste reduction, recycling, safe water source and disposal
- FDK3. **Principles of Processing Controls and Factory Design** – hygienic design of food manufacturing machinery and premises
- FDK4. **Food processing techniques** – for example thermal processing, chilling, canning, irradiation
- FDK5. **Maintenance in food manufacturing environment** – requirements including food grade oils, captive tools
- FDK6. **Safe cleaning in a food manufacturing environment** – separate storage of cleaning materials, cleaning in place procedures
- FDK7. **Third party food safety audits** – for example Food Standards Agency, retailer, British Retail Consortium (BRC); underpinning standards, when and how they are conducted
- FDK8. **Food planning considerations and implications** – including seasonal needs, shelf life requirements, cancellations, promotions, consumer trends, healthy eating
- FDK9. **Organoleptic quality testing** – five senses to check quality of product: smell, sight, taste, hearing, texture; customer specifications
- FDK10. **Food supply chain** – supplier assurance and integrity of raw materials: origin of raw materials; food fraud and raw materials vulnerability

Manufacturing Managers have the following core skills:

- S1. Identifying, forecasting, planning and scheduling resource requirements
- S2. Identifying data requirements; data analysis and interpretation
- S3. Using information technology
- S4. Reporting, for example manufacturing performance data
- S5. Communicating using different techniques, for example verbal, written, visual
- S6. Building and sustaining collaborative relationships to influence internal and external stakeholders
- S7. Presenting information, for example in staff briefings, customer meetings, management meetings
- S8. Managing people, for example recruiting, leading, coaching and motivating a team
- S9. Partnership working with local and/or regional union representation
- S10. Driving compliance with legal, customer and product standards on site
- S11. Devising, implementing and maintaining health & safety and environmental standards to achieve a harm free culture
- S12. Producing budget proposals; negotiating budgets with senior managers
- S13. Planning site based projects, for example for new capital investment, construction on site, new product lines and new equipment
- S14. Managing change
- S15. Conducting Continuous Improvement techniques within manufacturing environment
- S16. Problem solving/trouble shooting within manufacturing environment
- S17. Crisis management; agreeing, leading and implementing a site based disaster recovery plan
- S18. Responding to third party audits; managing relationships with audit personnel

Food & Drink option managers have the following skills:

- FDS1. Analysing food safety data, for example cooking/chilling temperatures, metal detection checks, storage and segregation
- FDS2. Responsive production planning to adjust to customer orders
- FDS3. Organoleptic testing of food and drink products
- FDS4. Promoting food safety culture

Manufacturing Managers demonstrate the following behaviours:

- B1. **Ownership of work:** decisive; effectively balances short term requirements with long term objectives to achieve goals; puts the customer at the heart of the decision making process to achieve 'win-win' commercial deals; plans and prioritises effectively
- B2. **Integrity and respect:** listens to others and seeks to build understanding; embraces the diversity of colleagues and makes complex issues easy for others to understand
- B3. **Influence and persuasion:** inspires others to achieve business goals; adapts language and communication medium to effectively win others over; proactively communicates clearly, concisely and on a timely basis; effectively influences key decision makers
- B4. **Responsiveness to change:** flexible to changing demands; resilient under pressure
- B5. **Innovation:** demonstrates curiosity to foster new ways of thinking and working; seeks out opportunities to drive forward change and improvements for the business

Section 3: Additional Information

Duration Typically four years

Typical Entry Requirements Typically three A levels or relevant industry work experience

Level 6

English and Maths Apprentices without level 2 English and mathematics will need to achieve this level prior to taking the end-point assessment for this apprenticeship. For those with an education, health and care plan or a legacy statement, the apprenticeships English and mathematics minimum requirement is Entry Level 3. A British Sign Language qualification is an alternative to English qualifications for those whom this is their primary language.

Qualification Manufacturing Management Degree

Renewal After three years