



Summary of Learning Outcomes

Level 3 Award in Food Safety Supervision
for Manufacturing

Qualification Number: 500/6698/5

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SUMMARY OF LEARNING OUTCOMES FOR LEVEL 3 AWARD IN FOOD SAFETY SUPERVISION FOR MANUFACTURING

Summary of Learning Outcomes:

1. Introduction to Food Safety
 - 1.1 Candidates must understand the importance of behaving responsibly by being able to:
 - 1.1.1 Explain the importance of food safety and requirement for effective food safety procedures
 - 1.1.2 Identify the moral, economic and legal impact of poor and good food safety practices to food businesses, customers and employees
 - 1.2 Microbiology (Multiplication & Survival Hazards)
 - 1.2.1 Candidates must understand how micro-organisms pose a hazard to food safety by being able to:
 - 1.2.1.1 Explain the nature and sources of micro-organisms
 - 1.2.1.2 Identify the hazard of multiplication and survival posed by micro-organisms. Explain why it is important to control micro-organisms and give examples of how this can be achieved in a manufacturing environment
 - 1.2.1.3 Recognise that spoilt food can cause a food safety hazard
 - 1.3 Contamination Hazards and Controls
 - 1.3.1 Candidates must understand the concept of food hazards caused by contamination of food by being able to:
 - 1.3.1.1 Identify common causes of microbiological, physical, chemical and allergenic contamination hazards and how the risk from each can be controlled in a food manufacturing environment
 - 1.4 Food Poisoning and its Control
 - 1.4.1 Candidates must know and understand the main reasons for food poisoning and foodborne illnesses and understand the importance of preventing illness to consumers of manufactured food products, by being able to:

- 1.4.1.1 Identify the main characteristics of food related illness and know how they may be controlled in a manufacturing environment

1.5 Food Handlers and Personal Hygiene

- 1.5.1 Candidates must understand the importance of keeping themselves clean and hygienic by being able to:

- 1.5.1.1 Explain how food handlers can be both sources and vehicles of food contamination hazards and how they can contaminate food

- 1.5.1.2 Identify the general principles of good personal hygiene and outline how to control hazards associated with poor personal hygiene

- 1.5.1.3 Explain the personal hygiene practices that staff should follow according to operational requirements including hand washing, wearing of protective clothing, footwear and headgear, wearing of jewellery and accessories, treatment and covering of cuts, boils, grazes and wounds

- 1.5.1.4 Explain why it is important to have systems in place regarding the reporting of illness and infections promptly and identify action to be taken if a food handler poses a threat to the safety of the food

- 1.5.1.5 Describe the role of the supervisor in securing high standards of staff personal hygiene

1.6 Food Safety Management Systems and HACCP

- 1.6.1 Candidates must understand the concept of HACCP as a food safety management system and should be able to:

- 1.6.1.1 Outline the principles and procedures involved in systems such as Hazard Analysis Critical Control Point (HACCP)

- 1.6.1.2 Explain the role of the supervisor in the implementation and monitoring of a food safety management system, ensuring appropriate corrective action is taken when a critical limit is breached

1.6.1.3 Describe the role of the supervisor with regard to the verification of the HACCP system

1.7 HACCP from Delivery to Distribution

1.7.1 Candidates must understand how implementation and monitoring of food safety procedures can prevent foodborne illness and contamination of food by being able to:

1.7.1.1 Describe hazards, control measures, monitoring and corrective actions associated with the delivery, storage, preparation, thawing, hot processing, cooling, freezing, packing, final storage and transportation of manufactured food products

1.8 The Design and Construction of Food Premises and Equipment

1.8.1 Candidates must be aware of their role in reducing risks of food contamination from premises and equipment by being able to:

1.8.1.1 Outline the principles of good workplace design and layout

1.8.1.2 Recognise and report problems that could result in food contamination

1.8.1.3 Suggest measures to ensure that equipment does not result in food contamination

1.8.1.4 Outline why it is important to clear and dispose of waste promptly

1.9 Food Pests and Control

1.9.1 Candidates must understand the need for pests to be controlled in manufacturing premises and be able to:

1.9.1.1 State the hazards that can be posed by food pests and their control and give reasons for controlling pests in a manufacturing operation

1.9.1.2 Describe the role of the supervisor in pest management, including the identification of effective pest control measures

1.10 Cleaning and Disinfection

1.10.1 Candidates must understand the importance of effective cleaning and disinfection in food manufacturing premises and be able to:

1.10.1.1 Explain the requirement for cleanliness of food manufacturing premises and equipment

1.10.1.2 Identify typical areas in a manufacturing operation that will require cleaning, disinfecting and/or sanitizing

1.11 Supervisory Management

1.11.1 Candidates must have an understanding of the role of the supervisor in securing food safety, and be able to:

1.11.1.1 Explain the responsibilities of the supervisor

1.11.1.2 Communicate effectively, organise and contribute to staff training and record keeping

1.12 Food Safety Enforcement

1.12.1 Candidates must have a general understanding of the need for food safety enforcement and be able to:

1.12.1.1 Outline the role of the supervisor when an enforcement officer visits a food premise

1.12.1.2 State the types of penalties that can be applied if a food business or food handler contravenes food safety legislation

1.12.1.3 Outline the purpose of Industry Guides

2. **Outcome Details:**

2.1 Introduction to Food Safety

2.1.1 Candidates must understand the importance of behaving responsibly by being able to:

2.1.1.1 Explain the importance of food safety and requirement for effective food safety procedures

- (a) Define: food safety, food hygiene, food poisoning, hazard, food safety management system, pathogen, safe food
 - (b) Identify different categories of hazards in food safety (microbiological, physical, chemical and allergenic)
 - (c) Outline the importance of having effective food safety management procedures
- 2.1.1.2 Identify the moral, economic and legal impact of poor and good food safety practices to food businesses, customers and employees

2.2 Microbiology (Multiplication & Survival Hazards)

2.2.1 Candidates must understand how micro-organisms pose a hazard to food safety by being able to:

2.2.1.1 Explain what micro-organisms are and outline where they may be found

- (a) Define: bacteria, virus and mould
- (b) Identify the different types of bacteria of interest to the food industry, including pathogens, spoilage and beneficial
- (c) State the common sources of food poisoning bacteria

2.2.1.2 Identify the hazard of multiplication and survival posed by micro-organisms. Explain why it is important to control micro-organisms and give examples of how this can be achieved in a manufacturing environment

- (a) List the types of microbiological hazards
- (b) State the main characteristics of bacteria
- (c) Identify the main factors which influence the multiplication of food poisoning bacteria
- (d) Specify the temperatures which support the most rapid multiplication of food poisoning bacteria and the range of the danger zone and identify how this knowledge can be used to control multiplication and survival hazards
- (e) Explain the terms 'bacterial spore' and toxin

- (f) Describe the conditions under which spores and toxins are formed and the consequences these may have for food safety
 - (g) Identify different food types and outline the microbiological hazards posed by each type and give examples of raw food, high-risk foods, low-risk foods and ready-to-eat raw foods
 - (h) Suggest methods of minimising and preventing bacterial multiplication and state how this can help to reduce the likelihood of food poisoning
 - (i) Identify the methods used to destroy food poisoning bacteria in food
- 2.2.1.3 Recognise that spoilt food can cause a food safety hazard
- (a) Explain how spoilt food can cause a food safety hazard
 - (b) Recognise the signs of food spoilage and methods used to detect it
 - (c) Outline methods of preventing spoilage of food

2.3 Contamination Hazards and Controls

2.3.1 Candidates must understand the concept of food hazards caused by contamination of food by being able to:

- 2.3.1.1 Identify common causes of microbiological, physical, chemical and allergenic contamination hazards and how the risk from each can be controlled in a food manufacturing environment
- (a) Define contamination, cross-contamination, sources of contamination, route and vehicle
 - (b) Identify the types of contamination hazards likely to be found in a manufacturing business and give examples of each type (microbiological, physical, chemical and allergenic)

- (c) Identify the principal causes of food safety contamination hazards (e.g. human factors (including lack of effective supervision), lack of labelling information, cross-contamination, premises and waste, personal health, handling issues and pests)
- (d) List examples of common vehicles of microbiological contamination
- (e) List examples of how cross-contamination can occur and explain why it is important to separate raw and ready to eat foods
- (f) Illustrate how cross-contamination can be controlled in a manufacturing environment
- (g) Give examples of how physical hazards can be controlled in a manufacturing environment
- (h) Give examples of how chemical hazards can be controlled in a manufacturing environment
- (i) Identify foods that can cause allergic reactions and outline how to control the risk from allergens within a manufacturing environment

2.4 Food Poisoning and its Control

2.4.1 Candidates must know and understand the main reasons for food poisoning and foodborne illnesses and understand the importance of preventing illness to consumers of manufactured food products, by being able to:

- 2.4.1.1 Identify the main characteristics of food related illness and know how they may be controlled in a manufacturing environment
 - (a) Define: duration, food poisoning, risk groups, incubation/onset period, causative agent
 - (b) Define food poisoning and identify the main symptoms of food poisoning
 - (c) State the usual incubation period and duration of food poisoning

- (d) Identify those most at risk from food poisoning
- (e) State the causative agents of food poisoning and the common food vehicles
- (f) Identify the main causes of food poisoning
- (g) Recognise that food contaminated with food poisoning organisms usually looks, smells and tastes completely normal
- (h) Suggest methods of controlling food poisoning in a manufacturing environment
- (i) Identify common foodborne diseases (Campylobacter, Norovirus, E coli O157, listeria, typhoid, Hepatitis A and dysentery)

2.5 Food Handlers and Personal Hygiene

2.5.1 Candidates must understand the importance of keeping themselves clean and hygienic by being able to:

2.5.1.1 Explain how food handlers can be both sources and vehicles of food contamination hazards and how they can contaminate food

(a) List common sources of contamination from food handlers. Describe common routes and vehicles of contamination from chemicals, allergens, physical objects and micro-organisms

(b) Define the term "carrier". Distinguish between healthy and convalescent carriers

2.5.1.2 Identify the general principles of good personal hygiene and outline how to control hazards associated with poor personal hygiene

(a) State the main legal requirements regarding personal hygiene of food handlers, including exclusion, protective clothing and training

- (b) Explain what controls and procedures should be observed with regard to personal hygiene and recognise why food handling should be kept to a minimum
 - (c) Outline unhygienic practices and habits of food handlers that should be avoided
- 2.5.1.3 Explain the personal hygiene practices that staff should follow according to operational requirements including, hand washing, wearing of protective clothing, footwear and headgear, wearing of jewellery and accessories, treatment and covering of cuts, boils, grazes and wounds.
- (a) Describe how to wash hands correctly
 - (b) Identify the important times when hands must be washed
 - (c) Outline the hand washing facilities that should be provided in a manufacturing operation and the barriers to effective hand washing
 - (d) Describe the importance of wearing appropriate wound dressings
 - (e) Explain why people with open wounds should not enter or work in food production areas
 - (f) Outline what to do if a food handler has an open wound
 - (g) Explain the function of protective clothing
 - (h) Discuss the properties of protective clothing
 - (i) State when protective clothing should be changed and explain why this is important
 - (j) Explain how jewellery and personal effects can cause a hazard
- 2.5.1.4 Explain why it is important to have systems in place regarding the reporting of illness and infections promptly and identify action to be taken if a food handler poses a threat to the safety of the food
- (a) Identify the illnesses/symptoms/infections that must be reported

- (b) Explain how persons who are, or are suspected of being 'carriers' of food borne illness may expose food to risk of contamination
 - (c) Suggest suitable controls for preventing people contaminating food
 - (d) State the law regarding the exclusion of food handlers
 - (e) Outline the main guidance given in Fitness to Work
- 2.5.1.5 Describe the role of the supervisor in securing high standards of staff personal hygiene
- (a) Suggest methods of encouraging and monitoring standards of personal hygiene

2.6 Food Safety Management Systems and HACCP

2.6.1 Candidates must understand the concept of HACCP as a food safety management system and should be able to:

- 2.6.1.1 Understand the principles and procedures involved in systems such as Hazard Analysis Critical Control Point (HACCP)
- (a) Define: prerequisite programmes, flow diagram, HACCP, food safety management system, control measure, critical control point, critical limit, target level, monitoring, corrective action and verification
 - (b) State the principles of HACCP
 - (c) Discuss the role of the supervisor in the instruction and training of staff in HACCP procedures
 - (d) Recognise how food safety management systems may be adapted to suit the nature and complexity of the business
 - (e) State the law regarding the implementation of HACCP in manufacturing premises
- 2.6.1.2 Explain how the supervisor can contribute to the implementation and monitoring of a food safety management system, ensuring appropriate corrective action is taken when a critical limit is breached

- (a) Explain the importance of identifying hazards, control measures and critical limits at steps in the manufacturing process which are critical to food safety
 - (b) Identify methods of supervising food safety and explain how effective supervision can reduce the likelihood of a food safety hazard occurring and the impact a breach of critical limits may have on the safety of the product, public health and the organisation
 - (c) Outline methods of monitoring at all stages of food production in a manufacturing environment and how to interpret and use specifications
 - (d) Identify appropriate corrective actions for deviations from critical limits at critical control points in food production and outline suitable reporting procedures when control measures fail
 - (e) Explain the importance of up-to-date, accurate documentation and records, and provide examples of the type of records that may be used in a manufacturing business
- 2.6.1.3 Describe the role of the supervisor with regard to the verification of the HACCP system
- (a) Discuss the role of the supervisor in internal and external food safety inspections and audits
 - (b) Describe the role of the EHP/O during a routine food safety inspection

2.7 HACCP from Delivery to Distribution

2.7.1 Candidates must understand how implementation and monitoring of food safety procedures can prevent foodborne illness and contamination of food by being able to:

- 2.7.1.1 Describe hazards, control measures, monitoring and corrective actions associated with the delivery, storage, preparation, thawing, hot processing, cooling, freezing, packing, final storage and transportation of manufactured food products

- 2.7.1.2 Explain the importance of selecting reputable suppliers and identify controls to minimise the hazards from delivery and unloading
- 2.7.1.3 Identify how suppliers may be assessed for suitability, including policies and audit requirements
- 2.7.1.4 Outline suitable criteria for acceptance and rejection of supplies, including controls relating to transport, receipt and acceptance of supplies
- 2.7.1.5 Recognise a variety of sampling methods appropriate to deliveries of food products and supplies and know how they may be applied, including certificates of conformity and traceability requirements
- 2.7.1.6 Discuss the importance of clear labelling of food
- 2.7.1.7 Identify correct food storage conditions and specify the temperatures required for different food
- 2.7.1.8 Explain why stock rotation procedures are important. Distinguish between Use By and Best Before date codes and explain why food past its code must be disposed of
- 2.7.1.9 Specify suitable processing temperatures and/or timescales for delivery, storage, preparation, thawing, hot processing, cooling, freezing, packing, final storage and transportation of manufactured food products
- 2.7.1.10 Identify suitable monitoring procedures for all stages of food production in a manufacturing operation
- 2.7.1.11 Describe how to use thermometers correctly and outline simple methods of validating thermometers
- 2.7.1.12 State the law regarding temperature control and date coding applicable to manufacturing
- 2.7.1.13 Outline how traceability works and why it is important to food safety

2.8 The Design and Construction of Food Premises and Equipment

2.8.1 Candidates must be aware of their role in reducing risks of food contamination from premises and equipment by being able to:

2.8.1.1 Outline the principles of good workplace design and layout

(a) Identify design features for manufacturing establishments, including avoidance of cross-contamination through workflow and layout

(b) Outline the need for suitable lighting and ventilation and the properties of suitable internal finishes for fixtures and fittings

2.8.1.2 Recognise and report problems that could result in food contamination

(a) State the main legal requirements for food premises, waste and equipment

(b) Identify the hazards associated with poor design and construction of food premises

(c) Explain the meaning of the term 'linear workflow' and give examples of how this can be achieved

(d) Explain the importance of using washing and cleaning facilities and equipment properly

2.8.1.3 Suggest measures to ensure equipment does not result in food contamination

(a) Identify desirable properties for food equipment used in manufacturing operations, including colour coding

(b) Identify the hazards associated with damaged equipment and surfaces in a food room and give examples of the types of food safety hazards

(c) Recognise the action to take if damaged equipment or surfaces are identified in a food room

2.8.1.4 Outline why it is important to clear and dispose of waste promptly

- (a) Identify the hazards associated with incorrect waste management
- (b) Outline the requirements for internal and external waste management in a manufacturing business
- (c) Explain how to clear and dispose of waste safely
- (d) Explain the importance of keeping internal and external waste areas clean

2.9 Food Pests and Control

2.9.1 Candidates must understand the need for the control of pests in food manufacturing premises and be able to:

2.9.1.1 State the hazards that can be posed by food pests and their control and give reasons for controlling pests in a manufacturing operation

- (a) State the law regarding food pests and their control
- (b) Identify common food pests
- (c) List the main signs of pest infestations
- (d) Explain why food pests are a hazard to food safety and outline the role of the food handler in preventing the access and harbourage for pests, including keeping doors and windows closed, placing lids on waste containers and reporting potential entry points
- (e) Suggest suitable control measures that may be used in manufacturing operations
- (f) Recognise how inappropriate control measures can cause food safety hazards

2.9.1.2 Describe the role of the supervisor in pest management, including the identification of effective pest control measures

- (a) Identify the importance of training staff in reporting signs of pest activity and in taking appropriate action should there be evidence of pests

- (b) Explain the importance of liaison with an appropriate pest control contractor
- (c) Evaluate the effectiveness of pest control measures
- (d) Summarise the action to take in the event of a pest complaint by a customer or a member of staff

2.10 Cleaning and Disinfection

2.10.1 Candidates must understand the importance of effective cleaning and disinfection in food premises and be able to:

2.10.1.1 Explain the requirement for cleanliness of food premises equipment

- (a) Define: cleaning, bactericide, detergent, disinfectant, disinfection, sanitizer, sanitisation, sterilisation, steriliser, sterilising, biodegradable and clean in place
- (b) Identify the reasons for cleaning and identify how cleaning processes can be effectively supervised including the use and content of cleaning schedules
- (c) List the steps involved in cleaning and disinfecting or in sanitizing
- (d) Recognise the importance of using the correct equipment, utensils and chemicals when cleaning and outline the hazards associated with poor cleaning
- (e) Distinguish between 'clean as you go' and 'scheduled cleaning'
- (f) Specify safety precautions that should be considered when storing chemicals and cleaning and disinfecting work areas or equipment

2.10.1.2 Identify typical areas in a manufacturing operation that will require cleaning, disinfecting and/or sanitising

2.11 Supervisory Management

2.11.1 Candidates must understand the role of the supervisor in securing food safety and be able to:

- 2.11.1.1 Identify the responsibilities of the supervisor
- (a) Outline current food safety legislation requirements affecting supervisors responsibilities
 - (b) Estimate the resources required for food production operations
 - (c) Monitor activities and performance against organisational standards and targets
 - (d) Discuss what action to take when performance does not match up to standards and targets
 - (e) Identify the importance of providing feedback to the person responsible for the food safety procedures and the types of issues that need to be addressed
 - (f) Recognise the importance of contributing to the evaluation of the food safety procedures, including reporting procedures and how to make suggestions for improvement.
 - (g) Outline the importance of continuous improvement and why it is important for supervisors to contribute to the improvement process
 - (h) Explain the role of the supervisor in the investigation of a food poisoning allegation/incident
- 2.11.1.2 Communicate effectively, organise and contribute to staff training and record keeping
- (a) Identify the objectives and benefits of food safety training
 - (b) Explain what is involved in training and the type of aids that can be used for training
 - (c) Describe appropriate training methods
 - (d) Describe how to communicate standards and procedures to staff
 - (e) Discuss the planning of training

- (f) Suggest a variety of approaches to motivate staff to achieve the required standards of safety
- (g) Know where to obtain advice, support and assistance to ensure food safety is promoted and maintained
- (h) Explain the importance of training records

2.12 Food Safety Enforcement

2.12.1 Candidates must have a general understanding of the need for enforcement and be able to:

2.12.1.1 Identify a supervisor's role when an enforcement officer visits a food manufacturing premise

- (a) Identify the powers of enforcement officers, including powers of entry, to take samples, to take photographs, and to interview all food handlers
- (b) Explain the role of the enforcement officer with regard to providing advice, investigating complaints and improving food safety
- (c) Recognise the consequences of the service of a notice or the prosecution of a manufacturing business

2.12.1.2 State the types of penalties that can be applied if a food business or food handler contravenes food safety legislation

- (a) Identify the penalties that can be applied to both food handlers and food business operators for non compliance with food safety legislation
- (b) Explain what is meant by a due diligence defence
- (c) Recognise the importance of accurate written records in a due diligence defence

2.12.1.3 Outline the purpose of industry guides