

Level 4 Award in Food Safety Management for Manufacturing

Centre and trainer guidelines

This qualification meets industry's need for a high-level training programme with external accreditation.

The training programme is delivered by registered centres and trainers and consists of at least 36 hours of teaching time, typically over five or more days. Some programmes are delivered on consecutive days, often residentially – these 'intensive' programmes have special examination requirements to maintain the quality of the learning experience (see section 1.4).

For candidates to succeed in the assessment they must submit two workplace-based assignments, as well as take a written examination.

Successful candidates will be able to:

- guide and advise on the management of food safety in a manufacturing business
- contribute to the management of food safety in a manufacturing business
- identify further technical knowledge necessary in food safety management procedures
- determine further training requirements
- identify areas for legal compliance
- determine good practice
- design an improvement plan
- outline a HACCP-type plan
- promote and encourage good standards of food safety
- liaise with enforcement officers
- deliver level 1 and 2 food safety training (with appropriate training skills).

The programme is ideal for:

- owners or managers of manufacturing businesses
- trainers
- supervisors with level 3 food safety knowledge
- those who monitor and audit food safety systems.

Syllabus

A Introduction

Candidates should understand the relationship between food safety and the socio-economic cost of food-borne illness and is able to:

- i Outline the economic costs to employers and the personnel costs of food-borne illnesses.
- ii Explain the benefits to the employer of high standards of food safety.
- iii Describe the manager's role in managing food safety.
- iv State the trend in the incidence of reported cases of food-borne illnesses over recent years and the foods that are most commonly involved.
- v Explain the reasons for seasonal variations and the groups most at risk in reported outbreaks of food-borne illness.

B Ensuring compliance with legislation and industry guidance

Candidates should understand the format of UK and European food safety legislation as it relates to the management of food safety in a manufacturing business and be able to:

- i Understand the application of EC Directives to member states.
- ii Explain the key aspects of present UK legislation.
- iii Describe the role of industry guides and codes of practice.
- iv State how legislation is applied, actions that may be taken by enforcement officers and the consequences of non-compliance.
- v State the responsibilities of proprietors, managers, supervisors and food handlers towards food safety.
- vi Explain the role that managers have in communicating food safety to staff.
- vii State the responsibility that managers have towards the maintenance of appropriate food safety records and demonstrating due diligence.
- viii Describe the role of management when working with enforcement officers to investigate an outbreak of a food-borne illness.

C Food safety hazards

Candidates should understand the potential for food contamination and how it can be controlled in a manufacturing business and is able to:

- i Explain the hazards associated with skin injuries and infections, wearing of jewellery, nail varnish, inadequate protective clothing, personal bad habits and practices.

- ii Describe the most common intrinsic and extrinsic physical contaminants, inherent and introduced chemical contaminants (including mycotoxins), microbial contaminants (including bacterial toxins), and food allergens and explain the controls for prevention, detection, and removal.
- iii State, with examples, the symptoms of acute and chronic food-borne illness caused by some chemicals, poisonous plants and certain types of fish.
- iv Describe the structure, shape and size of bacteria, the functions of spores and their role in the survival of bacteria and describe toxin formation, and distinguish between exotoxins and endotoxins.
- v Explain how bacteria multiply, the influencing factors, the generation times and the significance of the growth curve.
- vi Explain the principles involved in using time and temperature to control microbial and enzyme activity in food.
- vii Explain the methods used to identify bacteria.
- viii State the differences between food poisoning and food-borne infection and the symptoms of illness they cause.
- ix State the sources, common foods involved, incidences, vehicles, routes of transmission, onset times, symptoms, likely carrier status and control measures for: *Salmonella* spp, *Clostridium perfringens*, *Staphylococcus Aureus*, *Clostridium botulinum*, *Bacillus cereus*, *Vibrio parahaemolyticus*, *E-coli* and *E-coli* O157, Bacillary dysentery, *Listeria monocytogenes*, *Salmonella* Typhi and *Salmonella* Paratyphi, *Campylobacter* enteritis, viruses, yeasts, moulds and parasites.
- x State the nature of food spoilage organisms, the effects they can have on those who ingest them and how they are controlled in the processing of food.

D Allocation of responsibilities

Candidates should understand and be able to allocate responsibilities and practice the management skills required to ensure food safety and be able to:

- i State the personal requirements necessary for a food handler and explain the need for careful staff selection.
- ii State why all staff have responsibilities in respect of food safety.
- iii State the controls necessary in respect of persons suffering from, or suspected of, suffering from food-borne illness.
- iv Explain the problems caused by carriers and the controls that can be implemented in a manufacturing environment.

- v Describe the role of the food safety manager when new products are introduced or changes to products are made.
- vi Explain how non-food personnel, such as maintenance staff, visitors and delivery persons, can contaminate food and how this can be managed.

E Managing the operational requirements of a safe food business

Candidates should understand the importance of factory and equipment design to keep food safe and be able to:

- i Describe the criteria used in selecting a suitable site for a food premises and the internal design with regard to work flow, personnel facilities, waste disposal and adequate cleaning and disinfection
- ii Explain how standards are maintained in respect of transporting food internally and externally
- iii Explain safety information relating to the product and packaging
- iv Describe the design features and properties of food equipment
- v Explain the requirements for efficient and hygienic use of chillers, refrigerated and frozen food storage units
- vi Establish a priority list for repairs and improvements based on food safety risks
- vii Explain the role of safe storage and handling of food to minimise contamination and how stock control systems can be implemented, monitored and recorded

F Cleaning and disinfection regimes

Candidates should understand the principles and procedures for the satisfactory cleaning and disinfection of food premises and be able to:

- i Explain the need for and benefits of cleaning and the principles of implementing and managing a cleaning system including safe storage of cleaning materials
- ii Define the terms cleaning, detergent, disinfection, sanitiser and sterilisation and the properties required for the chemicals used for each process.
- iii Describe cleaning processes, including CIP, for a range of activities, areas and equipment in a manufacturing plant.
- iv Describe the management and administrative functions in relation to cleaning and cleaning schedules.

G Supplier quality and safety controls

Candidates should understand the importance of good raw material intake and be able to:

- i Explain the importance of purchasing only from reliable sources.
- ii Describe the methods that can be used to assess the safety of incoming stock and food equipment.
- iii Describe the requirements for safe transport, delivery and receipt of stock.

H Pest controls

Candidates should understand the need for the control of food pests in premises used for the manufacture of food and be able to:

- i Explain the habitat and characteristics of food pests, such as rats, mice, flies, cockroaches, psocids, pharaoh's ants, stored product insects and birds and the reasons for controlling them in food factories.
- ii Explain the environmental, physical and chemical methods of controlling food pests, including their limitations.
- iii Explain the importance of obtaining and/or utilising professional advice or personnel, and monitoring the effectiveness of their methods.

I Establish food safety management procedures

Candidates should understand the seven basic principles of the HACCP system and be able to:

- i Explain the importance of implementing a HACCP system and how it can be applied to various products.
- ii Explain how to develop a HACCP plan, including a HACCP team, the multidisciplinary nature of HACCP and its scope.
- iii Produce product workflow diagrams for a range of products and explain how they can be verified.

J Monitoring the implementation of food safety management procedures

Candidates should understand the importance of implementing a safe food procedure and be able to:

- i Explain how hazards are identified and how they are assessed as being critical to food safety.
- ii State how critical limits are set, implemented, including tolerance parameters, recorded and monitored.
- iii Explain how corrective actions are implemented if controls are not met and managed.

- iv Establish procedures to verify the efficiency of the HACCP system.
- v State how changes of product and operations can affect food safety procedures and how changes can be managed.

K Maintaining food safety management procedures

Candidates should understand the importance of system evaluation and communication of change and be able to:

- i Explain the importance of monitoring and reviewing procedures and responding to problems.
- ii Explain the importance of regular management inspections and internal audits.
- iii State how the HACCP system can be communicated to all staff and develop a communication system when changes in procedure occur.
- iv Establish procedures to evaluate and review the HACCP system.

L Communication, sources of information and training

Candidates should be able to communicate staff responsibilities within a food management system and be able to:

- i Describe how food safety procedures can be communicated to all staff responsible for its implementation, maintenance, monitoring and evaluation to develop and maintain a food safety culture.
- ii Describe the sources of further information and guidance on food safety and food safety management systems and acknowledge when this may be required.
- iii State the need for, and benefits of, food safety training.
- iv Explain the factors to be considered in the development, content and methods of effective food safety training programmes required for all associated personnel.
- v Explain the use and benefit of assessing training needs and the maintenance of training records.

Programme information

1 Programme structure

- 1.1 The programme must cover the syllabus in a minimum contact time of 36 hours. Contact time is the time taken to deliver actual training and does not include independent assignment work, refreshment breaks, revision sessions or 'mock' examinations.
- 1.2 Centres may formulate the programme structure to suit clients' needs. However, the training programme must cover the whole syllabus.
- 1.3 In addition to the training, candidates are required to submit two assignments from the list set by the CIEH. The required standard of 30 marks must be achieved in each assignment before the candidate is eligible to sit the examination.
- 1.4 Where programmes are delivered over a period of five consecutive normal working days (an intensive programme) candidates must be allowed a period of at least 28 days between the end of the programme and the examination to assimilate the knowledge and complete the assignments.
- 1.5 Ideally the training should be trainer-led with as many opportunities as possible for candidate participation and may include site visits, individual or group exercises. Time taken for site visits should be in addition to the minimum recommended programme length.
- 1.6 All centres will be provided with sample examination questions and answer information. The questions may be photocopied or downloaded from the CIEH website.
- 1.7 Candidates must complete at least 80% of the programme to be eligible to take the examination. Trainers should submit a request for special consideration where circumstances have prevailed that have prevented a candidate from attending 80% of the programme (see 'Procedure for special consideration' in the *Procedures Manual*).
- 1.8 Candidates who achieve an overall mark between 60–74% will achieve a pass grade, those achieving 75–89% will be awarded a merit grade and those achieving 90% or more will be awarded a distinction grade. Candidates who do not achieve at least 60% will be deemed to have failed.
- 1.9 Candidates have one opportunity to re-sit the examination upon submission of the appropriate candidate entry fee. Candidates who do not re-sit within 12 months of the examination, or fail their second attempt, are required to complete the whole programme again re-sitting the examination and resubmitting the assignments.

2 Administrative procedures

- 2.1 To receive examination papers, centres must complete an order form and send or fax it to Customer Support at least 28 days prior to the examination date. Emailed orders will not be accepted.

- 2.2 Changes to the order can be made in writing up to 14 days prior to the examination date.
- 2.3 If you wish to increase the number of examination papers ordered after this date, you will incur an additional administration fee.
- 2.4 Examination papers are serial numbered and assigned specifically to the date you have chosen, they cannot be used on any other date.
- 2.5 Examination papers will be dispatched to centres seven days prior to the examination date. If you do not receive them, contact Customer Support – on 020 7827 5800 or email examinations@cieh.org – as a matter of urgency.
- 2.6 The conduct of the examination is the responsibility of the trainer (see 'Procedure for examination and assessment' in the *Procedures Manual*).
- 2.7 Special examination arrangements can be made to assist candidates who have learning difficulties or candidates for whom English is not a first language (see 'Procedure for reasonable adjustment' in the *Procedures Manual*).
- 2.8 The CIEH must be notified of any changes in circumstance immediately (see 'Procedure for special consideration' in the *Procedures Manual*). Trainers must complete a 'Request for special consideration' form and additional charges may be incurred.
- 2.9 If a candidate is unable to attend the examination due to ill health, a copy of the medical certificate and the unused examination paper are required to secure a credit.
- 2.10 At the end of the examination all the papers, used and unused, must be returned to Customer Support.
- 2.11 Make sure that the assessment results sheet(s) and candidate assessment records have been completed properly.
- 2.12 Send the examination papers (used and unused), together with the examination scripts, assessment results sheet(s), candidate assessment records, assignments and examination feedback form by registered post within 24 hours of the examination. Make sure the package is wrapped securely.
- 2.13 The CIEH will not accept responsibility for the examination scripts and assignments until they are received at Chadwick Court.
- 2.14 Centres must be aware that examiners have strict marking deadlines. If assessment materials are not sent to Customer Support within 24 hours of the examination, the processing of results and certificates will be delayed.
- 2.15 The results take approximately 6–8 weeks to process as the examination scripts are sent to an examiner and then on to a CIEH moderator, together with the trainer-marked assignments, for standardisation. All results and certificates are sent directly to the centre.

- 2.16 On receipt of the certificates, the trainer should check the certificates to ensure they are correct. They should then be signed by the Programme Director and despatched to the candidates. Any incorrect certificates should be crossed through and returned to Customer Support with the replacement certificate order form detailing the error (this form can be downloaded from our website www.cieh.org).
- 2.17 CIEH regrets that it cannot give results to individual candidates.
- 2.18 Candidates should be made aware of the need to store the certificate safely since they may require it for verification purposes in the future.
- 2.19 Replacement certificates are available in the event of loss or damage, but there is a fee payable.
- 2.20 In the event that a trainer or candidate is dissatisfied with the result(s) the appeals procedure can be invoked (see 'Procedure for candidate appeals' in the *Procedures Manual*).

3 The assignments

- 3.1 Each candidate is required to produce two assignments, each one being about a food safety procedures or control method. There are eight assignment topics – one is compulsory and the candidate must select the second topic from the remaining seven. Each assignment must be related to a specific manufacturing business, which can be the same for both assignments.
- 3.2 The assignment titles should be provided to candidates at an early stage of the programme, and a session on selecting and undertaking assignments must form part of the training programme.
- 3.3 Trainers will need to provide appropriate post-programme support for candidates submitting assignments. However, there is no reason why candidates cannot commence planning during the training programme itself following the relevant topic being taught.
- 3.4 Each assignment must contain the following sections:
- i A description of how a food safety management procedure/control ensures effective compliance with current legislation and codes of practice in a manufacturing business
10 marks
 - ii An explanation of how a manager in a manufacturing business can establish, monitor and verify food safety management procedures/controls.
15 marks
 - iii A critical analysis of an incident when a food safety management procedure/control failed – including recommendations of the corrective actions that could be taken and an explanation of how this information could be communicated to staff to ensure food safety in the future.
25 marks

- 3.5 The assignment topics are:
- A Food safety management procedures (compulsory)
 - B Allergen contamination
 - C Chemical contamination
 - D Cleaning and disinfection
 - E Personal hygiene
 - F Pests
 - G Physical contamination
 - H Temperature

The performance criteria are included on the marking grid on the candidate assessment record.

- 3.6 Assignments should be written in the style of a report and should include:

An introduction – outlining the purpose and scope of the report and explanation of context of the analysis (i.e. the nature of the business operation).

A full analysis of the topic structured according to three performance criteria

A conclusion – summarising the main findings

References – including full bibliographic details of all the sources used

Appendices – including only essential and relevant material to support key points of the report.

- 3.7 Reports should not exceed 2,500 words (excluding references and appendices).
- 3.8 Documents submitted for assessment cannot be returned to the candidate.
- 3.9 Trainers are encouraged to give guidance to their candidates when they are completing assignments. Up to two drafts of an assignment can be submitted to the trainer for comment prior to submission of the final assessment. Any help given should be referred to in the trainer's comments section, alongside the marking criteria, on the Candidate Assessment Record.
- 3.10 Suitable feedback is essential. It should be helpful, constructive, positive and indicate areas where further improvement could be made. Trainers should be confident to give high marks where work is good, and low marks where work is inadequate.
- 3.11 All assignments must be marked using the CIEH performance criteria and marking grid on the candidate assessment record. This will ensure that candidates are marked consistently.
- 3.12 Trainers must make it clear on the marking grid and trainer feedback section of the candidate assessment record where the marks have been allocated. It is insufficient only to state a total mark.

- 3.13 Candidates for the examination must first achieve a minimum mark of 30 on each assignment. Over-generous marking of poor assignments will not help candidates as moderators are required to scrutinise assignment marking and, in certain cases, such situations may result in a candidate failing.
- 3.14 The trainer must record all assignment marks on the assessment results sheet.
- 3.15 The trainer and the candidate must sign the verification statement on the front of each candidate assessment record.

4 The examination

- 4.1 The examination must be conducted according to the 'Procedure for examination and assessment' (see *the Procedure Manual*).
- 4.2 The CIEH Level 4 Award in Food Safety Management for Manufacturing examination paper. The paper consists of two parts, A and B (both parts must be attempted):
 - Part A: Five structured questions, worth 15 marks each. All questions must be answered.
 - Part B: Three free response questions, worth 25 marks. One question only must be answered.
- 4.3 Candidates have 2½ hours to complete the examination.
- 4.4 The final mark is made up of marks achieved in both the written examination and the assignments. Candidates must gain at least 60% in the written examination and an accumulative mark of 60–74% to achieve a pass, 75–89% and above to achieve a merit and 90% and above to achieve a distinction.



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