All Food Hygiene
Accredited HACCP and Food Hygiene Training

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RSPH
ROYAL SOCIETY FOR PUBLIC HEALTH
VISION, VOICE AND PRACTICE

Level 4 Award in HACCP Management for Food Manufacturing

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This qualification has a Credit Value of 4

Ofqual Qualification Number 500/66523/3

40 Guided Learning Hours

Description

Hazard Analysis and Critical Control Point (HACCP) is a well established system of food safety management. This Level 4 qualification covers the importance of HACCP-based food safety management procedures, the management and implementation of HACCP-based procedures, development of the procedures and the evaluation of the procedures. The qualification is firmly based on the National Occupational Standards developed by Improve, the Sector Skills Council for the food and drink manufacturing industry, and conforms to the qualification template developed by RSPH, other awarding bodies and Improve.

The aim of this qualification is to develop an understanding of HACCP-based food safety management. Holders of this qualification will have the appropriate knowledge and understanding to be an integral part of a HACCP team and to manage the implementation of a HACCP-based system in the work environment. Although designed primarily for employees of the food manufacturing industry, this qualification will also be of benefit to caterers and retailers.

Summary of Outcomes:

To achieve this qualification, a candidate must:

1. **Explain the importance of HACCP based food safety management systems,** *by being able to:*

    ➢ Explain the HACCP approach to food safety procedures
    ➢ Review legislation relating to HACCP.

2. **Discuss the management and implementation of HACCP based procedures** *by being able to:*

    ➢ Discuss the allocation of responsibilities and resources
    ➢ Explain the importance of effective communication
    ➢ Develop the HACCP team
    ➢ Identify staff training needs.

3. **Review the development of the HACCP based procedures,** *by being able to:*

    ➢ Explain the prerequisites for HACCP
    ➢ Analyse food production processes including use of end product
    ➢ Produce process flow diagrams
    ➢ Carry out hazards analysis and risk assessment in the production process
    ➢ Determine critical control points, critical limits and corrective actions

4. **Evaluate HACCP based procedures,** *by being able to:*

    ➢ Explain documentation and record keeping procedures
    ➢ Discuss the verification and review of procedures

Content:

1. **Importance of HACCP-based food safety management systems**

   The HACCP approach to food safety management: HACCP explained as a proactive, preventative system; overview of HACCP; the seven HACCP principles; HACCP terminology; definition of HACCP terms as stated in *Codex Alimentarius*; HACCP is applied separately to specific operations; importance of pre-requisite programmes, education and training; advantages and benefits of HACCP systems.

   Legislation relating to HACCP: relationship of European legislation to UK food safety legislation; legal status of Acts of Parliament, Regulations and Directives; importance and main provisions of the 2005 legislation (EC Directive 852/2004 *'Hygiene of foodstuffs'*): The Food Hygiene (England) Regulations 2006, The Food Hygiene (Scotland) Regulations 2006, The Food Hygiene (Wales) Regulations 2006, The Food Hygiene Regulations (N. Ireland) 2006 or any superseding legislation; enforcement of legislation and consequences of non-compliance; relevance of Codes of Practice and Industry Guides produced by Government departments and the food trade.

2. **Management and implementation of HACCP-based procedures**

   Allocation of responsibilities and resources: allocation of responsibilities and resources within the HACCP team and to staff that are not part of the team; responsibilities to include those for staff training, HACCP pre-requisites, food safety policies, supplier information, monitoring and recording, record keeping, development of HACCP plan, implementation of corrective actions, identification of hazards, risks, critical control points, critical limits, and corrective actions; allocation of responsibility for verification and maintenance of the HACCP plan; determination of resources required for HACCP-based procedures; allocation of resources to appropriate staff.

   Importance of effective communication: need for effective communication to demonstrate management commitment to food safety, need for a food safety management system, food safety standards, food safety management procedures, roles and responsibilities of staff, importance of reporting critical limits that are exceeded and use of control measures or corrective actions; communication methods such as team meetings, newsletters, notice boards; role of managers and supervisors.

   Develop the HACCP team: composition of the HACCP team; appropriate knowledge, competence and expertise; identification and utilisation of appropriately experienced staff from within the workforce; roles, responsibilities and levels of authority of members of the HACCP team; use of *ad hoc* members, external experts and consultants.

Staff training needs: identification of skills and knowledge required; role of skills audits in identifying and assessing training needs; training needs for different levels and categories of staff; HACCP awareness training; training in the use and reporting of corrective actions; legal requirements.

3. **Development of HACCP based procedures**

Prerequisites for HACCP: need for food businesses to have effective policies and procedures in place prior to the development of a HACCP-based food safety management system; prerequisites to include management commitment and leadership, resources and facilities, approval systems for suppliers, staff training, staff hygiene procedures, effective cleaning and disinfection procedures, pest management, waste management and labelling, traceability and recall procedures; validation and verification of prerequisite programmes.

Food production processes and use of the product: description of the product and procedures for manufacture; consideration of raw materials; importance of approved suppliers and food chain information; transport and receipt of raw materials; processing/treatment processes; storage of ingredients, intermediate and final products; packaging; distribution; intended use of the product; identification of at-risk groups; likelihood of bacterial contamination and/or growth; presence of preservatives.

Process flow diagrams: purpose of flow diagram; scope; preceding and subsequent steps to the specified operation; production and verification of the flow diagram.

Hazard analysis and risk assessment: methods for hazard analysis and risk assessment; biological, chemical (including allergenic) and physical hazards; examples of each type of hazard; hazards associated with particular processes; hazards associated with purchase of raw materials, delivery of raw materials, storage, handling, preparation, processing, cooling, post-processing treatments, packaging of finished product, transport of finished product; risk and severity of hazards; availability of support, information and advice for hazard identification; validation of information and advice obtained.

Critical control points, critical limits and corrective actions: control measures; possible controls for hazards associated with purchase of raw materials, delivery of raw materials, storage, handling, preparation, processing, cooling, post-processing treatments, packaging of finished product, transport of finished product; critical control points; identification of critical control points; use of decision trees; availability of support, information and advice for identification of critical control points; validation of information and advice obtained.

Parameters used in the measurement of critical limits such as temperature, time, pH, water activity, concentration; target levels and their benefits; relationship of critical limits to food safety; sources of information for critical

limits; danger to consumer if critical limits exceeded; examples of critical limits for a range of processes and critical control points; availability of support, information and advice for establishing critical limits; validation of information and advice obtained.

Corrective actions; need for corrective action if critical limits exceeded or not reached, or if monitoring indicates a likelihood of critical limits being exceeded or not reached; types of corrective action; verification of corrective actions; responsibility for implementing corrective action; importance of restoring control; need for action plans for restoring control; importance of monitoring after control restored; treatment of improperly processed product; importance of record keeping and reporting procedures for the use of corrective actions at critical control points.

4.   **Evaluation of HACCP-based procedures**

Documentation and record keeping: importance of documentation and record keeping; examples of HACCP records and documentation; importance of food chain information; storage of completed records.

Verification procedures: importance of verification of HACCP systems; validation of the HACCP plan; information required for validation; need for independent experts; steps in the HACCP system requiring verification; methods and frequency of verification; role of audits and inspections; end-product testing; verification reports; need for review of HACCP systems.

Assessment and Grading

Attainment of the Learning Outcomes will be assessed by a synoptic examination set by RSPH. The examination will consist of two papers; paper one will consist of six questions from a choice of eight, which have to be answered in two hours; paper two will consist of a case study to be completed in 90 minutes. All questions on both of the papers have to be answered.

The qualification is graded as either *Pass* or *Distinction*. Candidates who fail to reach the minimum standard for the *Pass* grade will be recorded as having failed the assessment and will not receive a certificate.

In order to be awarded a *Distinction,* candidates must be able to recall and apply relevant knowledge and facts from the entire specification with few significant omissions and demonstrate a high level of understanding of the principles and concepts used in food safety management. The majority of answers to examination questions will be correct and relevant. Candidates who attain a mark of 80% or greater in *both* examination papers will be deemed to have achieved the criteria for a *Distinction.*

In order to be awarded a *Pass,* candidates must be able to recall and apply relevant knowledge and facts from some parts of the specification and demonstrate a satisfactory level of understanding of the principles and concepts used in food safety management such that the candidate will be able to satisfactorily work in the food manufacturing or related industries. The majority of answers to examination questions will contain some information of relevance. Candidates who attain a mark of 60% or greater overall, and a minimum of 50% in *both* examination papers will be deemed to have achieved the criteria for a *Pass*.

The examinations are provided by RSPH. Dates of examinations are contained in RSPH's timetable of examinations.

Recommended Reading:

Codex Alimentarius. Codex Alimentarius Commission www.codexalimentarius.net
Gaze, R. 2009. HACCP: A Practical Guide (4th Edition). Campden BRI
Griffiths, A. 2005. HACCP Works (3rd Edition). Highfield .Co.UK
Van Shothorst, M 2004. A Simple Guide to Understanding and Applying the Hazard Analysis Critical Control Point Concept (3rd Edition). ILSI Europe Concise Monograph Series
Sprenger, R.A. 2006. Supervising Food Safety (10th Edition). Highfield .Co.UK
Sprenger, R.A.2006. Hygiene for Management (13th Edition). Highfield .Co.UK
Wallace, C.A. 2005. Intermediate HACCP. Highfield .Co.UK

Recommended prior learning:

It is recommended that candidates have a knowledge of food hygiene and safety equivalent to that contained in the RSPH *Level 3 Awards in Food Safety*

Key Skills:

It is expected that the delivery of this qualification should provide opportunities for the development of the following *key skills:*

Application of Number Levels 3 and 4
Communication Levels 3 and 4
Improving own Learning and Performance Levels 3 and 4
Problem Solving Levels 3 and 4
Working with Others Levels 3 and 4

Guidelines for key skills are shown in Appendix 1.

General Higher Level Skills:

It is expected that the delivery of this qualification should provide opportunities for the development of the following *higher level skills:*

Analysis
Evaluation
Integration

Guidelines for higher level skills are shown in Appendix 2.

Other Issues:

The delivery of this qualification could provide opportunities for contributing to an understanding of Spiritual, Moral, Ethical, Social and Cultural issues and an awareness of Environmental issues, Health and Safety considerations and European developments. Possible areas for discussion are shown below.

Spiritual	The qualification can contribute to an understanding of spiritual issues by allowing students to discuss how the approaches of different religions to food production were driven by considerations of food hygiene and safety.
Moral and Ethical	Moral and ethical issues can be developed in a discussion of the legal responsibilities of employees and employers, such as high standards of hygiene, provision of safe food and employee training.
Social and Cultural	A discussion of possible reasons for changes in food poisoning trends; consumption of raw foods such as fish and shellfish; different manufacturing systems and the growth of food outlets such as sandwich bars and takeaways can contribute to an understanding of social and cultural issues.
Legislative	Food safety legislation is explicit in the qualification. These issues can be developed in a discussion of the need for the legislation

and what businesses and managers need to do in order to comply with the legislation.

Economic   A discussion of the economic effect of food related disease on consumers and food businesses and the economic benefits to consumers and businesses of effective HACCP systems can contribute to an understanding of economic issues.

Health and Safety   Health and Safety considerations are explicit in the qualification. For example, 'Carry out hazards analysis and risk assessment in the production process.'

Sustainable Development   Awareness of sustainable development issues can be raised through a discussion of materials used in the construction of premises and equipment, the use of packaging for food and as a factor to consider in the resourcing of raw materials from suppliers.

European   The influence of European legislation on UK law is explicit in the specification of the qualification.

National Occupational Standards

The qualification has been mapped to the following National Occupational Standards of Improve.

Unit FS.109K Understand food safety management procedures in manufacture
Unit FS.115K Understand management of food safety in manufacture
Unit FS.121K Understand analysis and control of food safety hazards and risks in manufacture
Unit FS.125K Understand food safety policy and practice in manufacture

Further details of these National Occupational Standards can be obtained from RSPH Qualifications.

Restrictions on Candidate Entry:

Candidates should not enter, with another awarding body, for a Level Four qualification in HACCP.

Special Needs:

Centres that have candidates with special needs should consult The Society's *Regulations and Guidance for Candidates with Special Assessment Needs,* this is available from The Society and The Society's web site (www.rsph.org.uk).

Recommended Qualifications and Experience of Tutors:

The Society would expect that tutors have teaching experience and a qualification in a relevant subject area, but recognises that experienced teachers can often compensate for a lack of initial subject knowledge, or experienced practitioners for a lack of teaching experience. It is, however, recommended that tutors have experience of implementing and maintaining HACCP systems.

Suitable qualifications for the Level 4 Award in HACCP Management for Food Manufacturing include:

a)   Degree or Dip. HE in:

        Food Science
        Environmental Health
        Environmental Science
        Microbiology

        or one that contains elements of these subjects.

b)   HNC/D in one of the above.
c)   Graduate Diploma in Food Science and Technology of The Institute of Food Science and Technology.

Centres should be registered with The Society

Any enquiries about this qualification should be made to:

The Qualifications Department,
Royal Society for Public Health
Market Towers, 3rd Floor
1 Nine Elms Lane
London
SW8 5NQ

Tel. 020 3177 1600 Fax. 020 3177 1601
E.mail: Centresupport@rsph.org.uk

Appendix One: Key Skills Guidelines

This qualification provides a number of opportunities for candidates to develop competence in key skills and to produce evidence towards attainment of key skills. Successful completion of the qualification does not in itself imply attainment of the listed key skills; this is dependent on the candidate producing a portfolio of evidence and the teaching and learning methods adopted by the tutor(s) and candidate in the delivery of the qualification.

The specification content, which provides the most appropriate opportunity for key skill development, is signposted below.

Application of Number

Skill	**Specification Content**
N3.1 Plan and interpret information from **two** different types of sources, including a large data set.	Graphical and tabular information can be used to obtain information relating to current trends and statistics relating to food-borne illness (Learning Outcome 1 Explain the importance of HACCP based food safety management systems). Control measures; possible controls for hazards associated with purchase of raw materials, delivery of raw materials, storage, handling, preparation, processing, cooling, post-processing treatments (Learning Outcome 3). Processing/cooling times for batches of food can be calculated from the size of the batch and the processing/ambient temperature. Defrosting times for frozen food can be estimated from the weight of the food.
N4.1 Develop a strategy for using application of number skills over an extended period of time.	Opportunities can be established for using number skills by recording monitoring information in a graphical format (eg time and temperature charts for refrigerators, freezers and cold storage rooms), and using trends in this information to establish if corrective action might be

required.

Number skills can be used to develop charts for determining processing/cooking and thawing times for different batches of food

Communication

Skill		Specification Content
C3.1a	Take part in a group discussion.	Any part of the content could be used as the basis for a discussion.
C3.2	Read and synthesise information from at least **two** documents about the same subject. Each document must be a minimum of 1000 words long.	Any part of the content could be researched from textbooks and specialist journals
C4.1a	Develop a strategy for using communication skills over an extended period of time.	The development of communication skills are an important element in the qualification. For example: need for effective communication to demonstrate management commitment to food safety ;communication methods such as team meetings, newsletters, notice boards; role of managers and supervisors.

Improving own Learning and Performance

Skill		Specification Content
LP3.1	Set targets using information from appropriate people and plan how these will be met.	The manner in which candidates plan and carry out their programme of learning for this qualification, in consultation with their tutors/trainers, could provide evidence for this key skill or some elements of this key skill.
LP3.2	Take responsibility for your learning, using your plan to help meet targets and improve your performance.	
LP3.3	Review progress and establish evidence of your achievements.	
LP4.1	Develop a strategy for improving your own learning and performance.	
LP 4.2	Monitor progress and adapt your strategy to improve your performance.	
LP 4.3	Evaluate your strategy and present the outcomes of your learning.	

Information and Communication Technology

Skill		Specification Content
ICT3.1	Search for information, using different sources, and multiple search criteria in at least one case.	Information about any part of the content could be obtained from web-sites dealing with food safety. Books and articles can be accessed by on-line searches.
ICT4.1	Develop a strategy for using ICT skills over an extended period of time.	ICT can be used over a period of time by using ICT technology for record keeping purposes, to record operational procedures and to develop and update food safety management procedures.

Problem Solving

Skill	**Specification Content**

PS3.1 Explore a problem and identify different ways of tackling it.

PS3.2 Plan and implement at least one way of solving the problem.

PS3.3 Check if the problem has been solved and review your approach to problem solving.

PS4.1 Develop a strategy for Problem solving.

PS4.2 Monitor progress and adapt your strategy for solving the problem.

PS4.3 Evaluate your strategy and present the outcomes of your problem solving skills.

A number of areas within the specification can be delivered by using a problem-based approach to teaching and learning.

For example:
Develop the HACCP team: identification and utilisation of appropriately experienced staff from within the workforce; roles,

Process flow diagrams: purpose of flow diagram; scope; preceding and subsequent steps to the specified operation; production and verification of the flow diagram.

Corrective actions; need for corrective action if critical limits exceeded or not reached, or if monitoring indicates a likelihood of critical limits being exceeded or not reached; types of corrective action; verification of corrective actions.

Working with Others

Skill

Specification Content

WO3.1 Plan work with others.

WO3.2 Seek to develop co-operation and check progress towards your agreed objectives.

WO3.3 Review work with others and agree
ways of improving collaborative work in the future.

WO4.1 Develop a strategy for working with others.

WO4.2 Monitor progress and adapt your strategy to achieve agreed objectives.

WO4.3 Evaluate your strategy and present the outcomes from your work with others.

The manner in which candidates work with others in carrying out their programme of learning for this qualification, in consultation with their tutors and trainers, could provide evidence for this key skill or some elements of this key skill.

Appendix Two: Higher Level Skills Guidelines

This qualification provides a number of opportunities to promote the development of general higher level skills and abilities. Successful completion of the qualification does not in itself imply attainment of the listed skills. Promotion of the skills is dependent on the teaching and learning methods adopted by the tutor(s) and candidate in the delivery of the qualification.

The specification content, which provides the most appropriate opportunity for higher level skill development, is signposted below.

Analysis

	Content providing opportunity for skill development	Possible Assessment
A central theme of the qualification is the development and implementation of HACCP procedures. This requires the analysis of potential or actual risks to food safety, analysis of procedures to determine where risks can occur and the analysis of what may have caused any breakdown in procedures	Analyse food production processes including use of end product Carry out hazards analysis and risk assessment in the production process Determine critical control points, critical limits and corrective actions	Paper 1 of the assessment consists of six questions to be answered in 90 minutes from a choice of eight. A number of these questions may be based on 'mini' scenarios. Paper 2 of the assessment is a case study. Successful completion of the questions relating to mini scenarios and the case study will require demonstration of analytical skills

Evaluation

	Content providing opportunity for skill development	Possible Assessment
Managers of HACCP teams or potential managers of HACCP teams in the food manufacturing industry will need to evaluate potential risks to food safety and the effectiveness of their procedures for dealing with these risks. This will include evaluation of pre-requisite procedures such as those for approving suppliers, cleaning, pest control and staff training.	Develop the HACCP team Identify staff training needs Analyse food production processes including use of end product Carry out hazards analysis and risk assessment in the production process Determine critical control points, critical limits and corrective actions	Paper 1 of the assessment consists of six questions to be answered in 90 minutes from a choice of eight. A number of these questions may be based on 'mini' scenarios. Paper 2 of the assessment is a case study. Successful completion of the questions relating to mini scenarios and the case study will require an evaluation of the problems and their possible solutions

Integration

	Content providing opportunity for skill development	Possible Assessment
Managers and potential managers will need to integrate their analysis and evaluation of food safety hazards and risks and the various procedures for dealing with such risks into a coherent food safety management system.	Management of food safety will require integration of all of the content for the qualification.	Paper 1 of the assessment consists of five questions to be answered in 90 minutes. A number of these questions will be based on 'mini' scenarios. Paper 2 of the assessment is a case study. Individual questions for Paper 1 and for the case study will cover the content of more than one learning outcome.

		Successful completion of the assessment will require integration of knowledge and information from different aspects of the qualification.