

## **ENVIRONMENTAL HEALTH REGISTRATION BOARD**

### **Syllabus for the Higher Certificate in Food Control**

**(2016)**

#### **A syllabus providing an understanding of the theory and practice of food controls set down to protect human health compromised by unsafe food and unhygienic food premises**

This syllabus describes the expectations of the Food Standards Agency, and the Environmental Health Registration Board acting as its agent, for the purposes of registering candidates completing the award entitled: 'Higher Certificate in Food Control' in meeting the requirements of the Food Law Code of Practice (April 2015) and the Practice Guidance (October 2015) as they relate to the competency framework applied to authorised officers seeking to perform 'official controls', other than at Border Inspection Points.

The syllabus is presented as a series of learning outcomes divided into modules by subject. This does not imply that each should carry any sort of equivalence in terms of weighting or comparable value, merely, that in completing a programme of instruction and private study, a candidate would be expected to have met these outcomes.

<b>Module 1</b>	<b>The science and technology of food production</b>
	At the completion of an appropriate period of study, the candidate will be able to:
<b>1.01</b>	Articulate the concept of the 'farm to fork' approach to food safety, and in so doing outline those aspects of rearing and growing, slaughtering and harvesting, and 'on farm' processing that may impact adversely on the safety and quality of the food, especially those which will persist through the food chain.
<b>1.02</b>	Recognise the hazards to human health and food quality arising from microbial, chemical and physical contamination (including fungal metabolites e.g. mycotoxins), describing how the risk may vary during the steps in food production, storage and distribution.

<b>1.03</b>	Recognise how different stages in the food production chain - from the point when ingredients are received through to despatch and distribution - pose challenges to safety and quality, and so require adherence to 'good manufacturing practice'.
<b>1.04</b>	Understand the common processes used in food manufacture, including ultra-high temperature processing (UHT) and fermentation, and be able to discuss the validity of the processes in terms of food safety.
<b>1.05</b>	Explain the chemical nature and properties of foodstuffs that have a direct influence on health through diet (other than through allergenic effects), and indirectly through changes they might undergo during manufacture, processing and storage, such as acrylamide.
<b>1.06</b>	Explain the methods used to control against the proliferation of pathogenic and spoilage organisms associated with food, including different types of bulk storage and food packaging used in conjunction with other forms of food preservation, demonstrating their effectiveness to safeguard health and extend 'shelf-life'.
<b>1.07</b>	Describe the nature and purpose of the main types of additives used in the food industry, in each case indicating where they are prohibited or restricted by concentration, and how labelling serves to protect the consumer.
<b>1.08</b>	Explain the importance of maintaining high standards of microbial and chemical water quality in food production.

<b>Module 2</b>	<b>The biology of food (from primary production to point of sale)</b>
	At the completion of an appropriate period of study, the candidate will be able to:
<b>2.01</b>	Describe the structure and function of the main organs and systems of the human body, most notably the alimentary canal, explaining how pathogenic agents or toxins (like scombrototoxin or botulinum toxin), once ingested, come to cause infection or intoxication, and the likely prognosis once affected.

<b>2.02</b>	Draw from a body of knowledge on the comparative anatomy and physiology of the common food animals, and with particular focus on the functional systems in life, identify the cuts, organs and tissues that are normally encountered at retail, and be able to establish whether they are fit for human consumption.
<b>2.03</b>	Recognise the appearance of healthy and wholesome tissue of the common food animals when presented at the point of retail sale, and thereafter able to discuss the hazards and risks to human health when presented as a food commodity (including the common pathological and physiological conditions that might present at this point) before passing judgment on its fitness for human consumption and consumer acceptability.
<b>2.04</b>	Identify plant-derived foods ( fruits, vegetables, cereals, pulses, seeds, herbs and spices), - eggs and dairy products found commonly at retail sale or in use in catering environments, describing characteristics of their use, means of preparation, and conditions that may cause them to deteriorate or be deemed to be unfit for human consumption, and thus able to discuss the hazards commonly associated with these products and the likely impact on human health.
<b>2.05</b>	Identify the fish, shellfish and fishery products commonly found at retail in the UK, distinguishing them through their anatomical features and physiological characteristics, before determining their condition and fitness for human consumption.
<b>2.06</b>	Describe the cause and effect of the hazards associated with fish, fishery products and shellfish presented at retail sale in the UK, together with the nature and appearance of specimens and fishery products when they have spoiled or are deemed to be unfit for human consumption.
<b>2.07</b>	Identify the common insect, bird and mammalian pests associated with food and food premises, explaining how they might present a hazard to health and lead to wastage.
<b>2.08</b>	Identify the key allergens associated with food products sold in the UK, relating the hazard to the legislative requirement to forewarn customers and consumers by labelling and other means, and the measures expected of manufacturers, retailers and caterers to control against undeclared ingredients, contamination and cross-contamination.

<b>2.09</b>	Display an understanding of the checks on foods required at points of entry into the UK, including the need for enhanced sampling requirements in certain circumstances.

<b>Module 3</b>	<b>The microbiology of food (from farm to fork)</b>
	At the completion of an appropriate period of study, the candidate will be able to:
<b>3.01</b>	Appreciate the roles performed by micro-organisms, yeasts and moulds in food production, biotechnology, and spoilage and disease causation.
<b>3.02</b>	Distinguish between the food-borne diseases commonly encountered in the UK according to the organisms or agent responsible, including details drawn from the epidemiology on the source, nature and aetiology of each organism, and identifying where antimicrobial resistance plays a part in exacerbating the problem.
<b>3.03</b>	Explain the nature and impact on human health which may be caused by microbial contamination and the failure to protect food from such contamination.
<b>3.04</b>	Explain the effect of spoilage organisms on the quality of food and distinguish between these organisms and food-borne pathogens.
<b>3.05</b>	Explain the growth characteristics of the microbial agents that proliferate in food, and be able to discuss the susceptibility to changes in endogenous and exogenous conditions brought about through food preservation and use of antimicrobials.
<b>3.06</b>	Explain the use of microbes in food processing and be able to distinguish between these organisms and the spoilage and pathogenic micro-organisms which may also be found in food.

<b>Module 4</b>	<b>Controlling and maintaining hygienic food production</b>
	At the completion of an appropriate period of study, the candidate will be able to:
<b>4.01</b>	Recognise the principles of sound hygienic design and construction of premises and equipment, evaluating the capacity of both to produce food which is safe and of consistent quality against documented standards and specifications, identifying remedial action when defects are found.
<b>4.02</b>	Consider, critically, the traditional role performed by quality control systems, and, in particular, 'end-product testing' and inspection, in seeking to detect defects in food and food handling practices, and how this has given way to systems based on the principles of 'quality assurance'.
<b>4.03</b>	Understand the principles underpinning Hazard Analysis Critical Control Point (HACCP), describing, in detail, how it can be applied to different foodstuffs, at different points in their production and for different purposes, before exploring the means of communicating the responsibility of food business operators to undertake the analysis of hazards and assessment of risk.
<b>4.04</b>	Establish what is meant by a 'food safety management system' and how this forms a critical focus for food control.
<b>4.05</b>	Explain the special requirements imposed upon an establishment that is subject to approval, and the implications of the assignment of a 'health mark' or 'identification mark'.
<b>4.06</b>	Outline the different methods of controlling pests that commonly infest food and food premises, explaining how these relate to the biological, ecological and environmental factors that influence their survival and proliferation.
<b>4.07</b>	Recognise the role played by cleaning and disinfection strategies in safeguarding food against cross-contamination and the role played by management to see systems developed, implemented and reviewed.

<b>Module 5</b>	<b>Rudiments of Law and the law relating to food</b>
	At the completion of an appropriate period of study, the candidate, <i>having regard to any differences that may exist between the devolved countries of the United Kingdom</i> , will be able to:
<b>5.01</b>	Outline the development of Statute law in the UK, from its origin in the common law through to the emergence of Regulations from the European Parliament and national legislatures.
<b>5.02</b>	Describe the role performed by the Legislatures in England and in Europe in making food safety law, and the importance of separating this power with that of the Judiciary.
<b>5.03</b>	Demonstrate an understanding of the different sources of law, the distinction between civil and criminal cases (including the differential burden of proof) and how case law and legal precedent play a part in deciding their outcome.
<b>5.04</b>	Demonstrate the ability to locate relevant case law reports from different sources and an understanding of the legal features and elements of these reports, including judicial reasoning, legal interpretation, <i>obiter dicta</i> and <i>ratio decidendi</i> .
<b>5.05</b>	Identify the legislation that provides the basis for food safety control through enforcement in the UK, considering Statute, statutory instruments and regulations passed by the European Parliament and recognising the major food safety offences.
<b>5.06</b>	Demonstrate a detailed understanding of the grounds and circumstances that might lead to the service of an enforcement notice.
<b>5.07</b>	Have a detailed understanding of the powers to detain, seize and order the subsequent condemnation and disposal of unfit or suspect food.

<b>5.08</b>	Recognise the cases that feature offences under food safety law that can only be tried summarily, from those that are 'triable either way'.
<b>5.09</b>	Understand, in the context of food safety law, the grounds and procedures for appeal, and the applicability of statutory defences (in particular, 'due diligence'), as factors in the decision to initiate legal proceedings, or otherwise to pursue informal action.
<b>5.10</b>	Appreciate the rules of evidence as they might apply to the bringing of a criminal case for an offence under food safety law.
<b>5.11</b>	Bring together the knowledge and understanding gained through the learning outcomes above, construct a case around the circumstances of a contravention of food safety law that might be laid before a Magistrates Court.
<b>5.12</b>	Recognise the special demands of enforcement around the importation of food from third countries, so acquiring a familiarity with the legislation and sources of direction and advice available for authorities and authorised officer in the discharge of their duties and responsibilities.

<b>Module 6</b>	<b>The administration of food control</b>
	At the completion of an appropriate period of study, the candidate will be able to:
<b>6.01</b>	Identify the different executive agencies responsible for overseeing the administration and enforcement of food law in the UK and in Europe.
<b>6.02</b>	Describe in detail the role and function of the Food Standards Agency as the Central Competent Authority, recognising its relationship with other government agencies, non-government organisations, food authorities, and the general public, especially appreciating the role of the Food Hygiene Rating Scheme' to engage and empower the consumer.

<b>6.03</b>	Demonstrate an understanding of how the different roles and functions performed by the European Union have an impact on food safety in the UK in terms of standards, policy, law and enforcement.
<b>6.04</b>	Appreciate how other bodies and agencies working nationally and internationally play a direct or indirect part in influencing food safety standards and guidelines applied in the UK, recognising, especially, the WHO/FAO through 'Codex Alimentarius'.
<b>6.05</b>	Articulate the powers, duties and responsibilities of the authorised officer working in an enforcement role against all relevant provisions of the enabling legislation, substantive law and codes of practice as they relate to: entry to food premises; inspection of food, collection of evidence, service of notices and initiation of legal proceedings.
<b>6.06</b>	Understand the role of those authorised to protect health and the wider interests of the consumers at different points in the food chain, considering, especially, meat and poultry meat inspectors at abattoirs, fish inspectors at wholesale markets and official veterinarians and port health officers at border inspection posts and inland authorities, recognising their powers and duties in respect of both imported food and food destined for export.
<b>6.07</b>	Understand the circumstances when sampling for compositional compliance, chemical analysis and microbiological examination might be carried out as a legal requirement, the roles performed by the Public Analyst and Food Examiner, and the responsibilities and duties of the sampling officer.
<b>6.08</b>	Understand the ways in which different foods might be affected adversely by the actions of others, who, whether wittingly or unwittingly, pass off, misrepresent or otherwise cause to mislead another as to the fitness, quality or provenance of that food, identifying the measures available to detect and prevent food fraud, and in the event of transgression, the means of intervening to protect health and the interests of the consumer.

<b>Module 7</b>	<b>Information and intelligence gathering and dissemination</b>
	At the completion of an appropriate period of study, the candidate will be able to:

<b>7.01</b>	Recognise the importance and value of carrying out systematic inspections of food premises, identifying the role of the Food Law Code in ensuring its proper conduct, the recording of information, the 'rating' of risk, and the determination of the most appropriate course of action according to that risk, but taking care to differentiate between legal requirements and recommendations.
<b>7.02</b>	Explain the principles of 'inspection' and 'audit', distinguishing between them in terms of what they offer food safety when called to consider the hazards presented by a food operation, and the measure of a food safety management system to control the resulting risk.
<b>7.03</b>	Demonstrate an understanding of the process followed in food safety interventions that begins with identifying hazards, assessing/evaluating the risk, recognising remedial measures, and concludes with their implementation according to any enforcement strategy in place at the time that may call for action that is consistent, proportionate and in line with the 'hierarchy of enforcement'.
<b>7.04</b>	Understand the role performed by 'passive surveillance' in producing data on the incidence of disease and prevalence of particular pathogens, and by 'active surveillance' in supplying data that alerts the wider public health workforce to cases and outbreaks and informs the epidemiology of food-borne disease.
<b>7.05</b>	Recognise the need to collate and record information on a range of food safety matters, including the outcome of inspections, sampling and enforcement activity, and to see this made available in the form required by any suitably authorised agency or body requesting it.
<b>7.06</b>	Understand the process to be followed when called upon to investigate a complaint involving a foodstuff, including the need to acquire and manage information from different sources, secure evidence, and recommend a course of action, before seeing this assembled into a report or other suitable form, ahead of dissemination.
<b>7.07</b>	Appreciate the means by which data is acquired 'in the field', so understanding: the physical means of measuring accurately the temperature of food in storage; recording the physical appearance of a food commodity; and, the taking of a representative sample of food for analysis and aseptically for microbiological examination.

<b>7.08</b>	Understand, through instruction and practical experience in the laboratory: the principles of sampling; the nature and purpose of national and local 'sampling programmes'; how bacteria are cultured for the purposes of identification and enumeration; and, the means by which the efficacy of a disinfection regime can be established.
<b>7.09</b>	Explain the different contexts in which samples of food might be taken for microbiological examination; why 'sampling plans' are applied to different products; the purpose of 'indicator organisms'; how 'microbiological criteria' are applied to 'in process' and 'end-product' sampling; and, using 'field results', reach judgments on microbiological quality against standards, specifications and guidelines.
<b>7.10</b>	Recognise the purpose and value of labelling as a means of informing consumers of compositional and nutritional attributes and forewarning consumers of potential hazardous constituents, including allergens and additives, and in so doing identify misleading claims and contraventions of labelling regulations.

<b>Module 8</b>	<b>Measures to enhance the outcome of enforcement</b>
	At the completion of an appropriate period of study, the candidate will be able to:
<b>8.01</b>	Understand how food businesses respond differently to requirements to comply with standards set out in food hygiene legislation, and therefore can be expected to respond differently when subject to enforcement activity focused on compliance, this response being influenced by size, culture (both ethnic and managerial) and financial security.
<b>8.02</b>	Understand how competent authorities (and the enforcement officers they employ and authorise) should recognise the demands placed on food businesses through regulatory enforcement activity, and how the Government sees the need for this to influence their approach to enforcement and the strategies adopted to bring about compliance, as illustrated by the 'Regulators' Code' and 'Primary Authority'.

<p><b>8.03</b></p>	<p>Demonstrate familiarity with the food safety enforcement policies drawn up by competent authorities, setting out, <i>inter alia</i>, their strategies on compliance and undertakings to food businesses to act consistently and deliver enforcement proportionately i.e. having regard to the risk posed and according to the 'hierarchy of controls' (the 'graduated approach') whilst recognising cultural and ethnic sensitivities, and the need to support business and growth wherever possible.</p>
<p><b>8.04</b></p>	<p>Identify the importance of good inter-personal skills in all working relationships, but especially when working with food businesses where tact, honesty, respect, empathy and discretion are essential, demonstrate the ability to communicate effectively in person, where the intention is to impart information, require action on the part of the receiver or to resolve misunderstanding.</p>
<p><b>8.05</b></p>	<p>Recognise the value of team-working with colleagues <u>within</u> an organisation, and partnership-working with those <u>outside</u>, where special skills are needed to ensure that the benefits of collaborative working are felt, and enhanced outcomes are achieved.</p>
<p><b>8.06</b></p>	<p>Understand the processes at play when people are called to make difficult decisions, before demonstrating the ability to negotiate compliance or risk reduction that is acceptable to both parties, whilst accepting the need on occasion to make concessions.</p>