Group Award Specification for:

Professional Development Award (PDA) in Food Science

Group Award Code: GP9J 47

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Contents

1 Introduction

This document was previously known as the arrangements document. The purpose of this document is to:

- assist centres to implement, deliver and manage the qualification.
- provide a guide for new staff involved in offering the qualification.
- inform course managers teaching staff, assessors, learners, employers and HEIs of the aims and purpose of the qualification.
- provide details of the range of learners the qualification is suitable for and progression opportunities.

Representatives from centres, industry, higher education, Royal Environment Health Institute of Scotland (REHIS), and SQA designed the PDA in Food Science. It will prepare candidates for employment in a scientific capacity in the food and drink industry. It will provide them with the scientific skills required by the food and drink industry and give them relevant background knowledge and understanding to help them make the best use of these skills in a commercial environment.

2 Qualification structure

Learners require 4 SQA credits (24 SCQF points) in total to achieve the PDA in Food Science, 3 mandatory SQA credits and a further 1 SQA credit from the options section.

2.1 Structure

Unit title	Unit code	SQA credit value	SCQF level
Mandatory — 3 SQA credits required			
Microbiology of Foods 1	F6VL 34	1	7
Science for the Food Industry: An Introduction	F6VB 34	1	7
Food Analysis	F6VC 34	1	7
Optional — 1 SQA credit required			
Food Composition	F6VD 34	1	7
Food Hygiene Intermediate	F4TL 34	1	7
Hazard Analysis and Critical Control Points (HACCP)	J2EE 34	1	7

3 Aims of the qualification

The principal aim of the PDA is to provide a qualification that supports the upskilling and continuing development for employment in a scientific capacity in the food and drink industry.

3.1 General aims of the qualification

1 Provide recognition of existing skills.
2 Develop problem solving skills.
3 Develop planning and analysis skills.
4 Develop the ability to be flexible and to work co-operatively within a team structure.
5 Enhance career progression.
6 Enable progression to other qualifications with the SCQF.

3.2 Specific aims of the qualification

7 Enable candidates to develop a knowledge and understanding of the principles of food safety and hygiene.
8 Provide the underpinning scientific knowledge and understanding required to function effectively in the food and drink industry.
9 Develop scientific skills required by the food and drink industry.
10 Gain relevant background and understanding to help make the best use of these skills in a commercial environment.
11 Enable candidates to apply their knowledge and understanding of food science to key aspects of the food and drink industry.
12 To enable candidates to further develop their knowledge and understanding of food chemistry and microbiology, through the examination of food composition and food quality and safety.

4 Recommended entry to the qualification

Entry to this qualification is at the discretion of the centre. The following information on prior knowledge, skills, experience or qualifications that provide suitable preparation for this qualification is for guidance only.

Learners would benefit from having attained the skills, knowledge and understanding required by one or more of the following:

- Current or prior experience working in the food and drink industry
- Relevant SVQ at SCQF level 5 or above
- National Progression Award in Food Manufacture
- Foundation Apprenticeship in Food and Drink Technologies
- Different combinations of relevant national or vocational qualifications and/or equivalent qualifications from other awarding bodies

4.1 Core Skills entry profile

The Core Skill entry profile provides a summary of the associated assessment activities that exemplify why a particular level has been recommended for this qualification. The information would be used to identify if additional learning support needs to be put in place for learners whose Core Skills profile is below the recommended entry level or whether learners should be encouraged to do an alternative level or learning programme.

Core Skill	Recommended SCQF entry profile	Associated assessment activities
Communication	5	Learners must maintain details of their practical work, and can use written evidence to demonstrate knowledge. Learners may deliver presentations of their evidence orally.
Numeracy	4	Learners are expected to undertake calculations using scientific formulae and, using the outcome of these calculations, draw conclusions about the results of their practical work. This will involve quantitative data over a range and learners will be required to decide what numerical operations are to be carried out and the order in which to do them.
Information and Communication Technology (ICT)	4	Learners may use ICT when they prepare for and take part in the practical activities included in the units, and to evidence their written work.
Problem Solving	4	Aspects can be developed whilst undertaking the Science for the Food Industry unit. The Critical Thinking component of *Problem Solving* at SCQF level 5 is embedded in the *HACCP* unit. When a learner achieves the unit, their Core Skills profile will also be updated to include this component.
Working with Others	4	Learners must take the opportunity to develop this core skill whilst carrying out practical work.

5 Additional benefits of the qualification in meeting employer needs

This qualification was designed to meet a specific purpose and what follows are details on how that purpose has been met through mapping of the units to the aims of the qualification. Through meeting the aims, additional value has been achieved by linking the unit standards with those defined in national occupational standards and/or trade/professional body requirements. In addition, significant opportunities exist for learners to develop the more generic skill, known as Core Skills through doing this qualification.

5.1 Mapping of qualification aims to units

Code	Unit title	Aims											
		1	2	3	4	5	6	7	8	9	10	11	12
F6VL 34	Microbiology of Foods 1	x	x	x	x	x	x	x	x	x	x	x	x
F6VB 34	Science for the Food Industry: An Introduction	x	x	x	x	x	x	x	x	x	x	x	x
F6VC 34	Food Analysis	x	x	x	x	x	x	x	x	x	x	x	x
F6VD 34	Food Composition	x	x	x	x	x	x	x	x	x	x	x	x
F4TL 34	Food Hygiene Intermediate	x	x	x	x	x	x	x					
J2EE 34	Hazard Analysis and Critical Control Points (HACCP)	x	x	x	x	x	x	x	x	x	x	x	x

5.2 Mapping of Core Skills development opportunities across the qualification

Unit code	Unit title	Communication			Numeracy		ICT		Problem Solving			Working with Others	
		Written (Reading)	Written (Writing)	Oral	Using Number	Using Graphical Information	Accessing Information	Providing/Creating Information	Critical Thinking	Planning and Organising	Reviewing and Evaluating	Working Co-operatively with Others	Reviewing Co-operative Contribution
F6VL 34	Microbiology of Foods 1	x	x	x								x	
F6VB 34	Science for the Food Industry: An Introduction		x	x	x	x		x	x		x	x	
F6VC 34	Food Analysis	x	x	x	x	x						x	
F6VD 34	Food Composition	x	x	x				x		x		x	
F4TL 34	Food Hygiene Intermediate	x			x	x	x		x				
J2EE 34	Hazard Analysis and Critical Control Points (HACCP)								S	x			

S = signposted 4/5/6 = SCQF level X = opportunities to develop

5.4 Assessment strategy for the qualification

Unit	Assessment
Microbiology of Foods 1	Learners should be observed while undertaking the three practical laboratory exercises and a record should be kept of this observation. Learners should also keep records of the results of each practical exercise and analyse the data generated.
Science for the Food Industry: An Introduction	Learners will need to provide evidence to demonstrate their knowledge and/or skills across all outcomes by showing that they can explain relevant examples of information relating to food technology. Explanations should be scientifically accurate and, where appropriate, should make use of relevant formulae. Learners will need to provide evidence to demonstrate their knowledge and/or skills by showing that they can perform two laboratory experiments accurately and record the results in a suitable format.
Food Analysis	Learners will need to provide written/oral and practical evidence to meet all the knowledge and/or skills items by showing that they can carry out eight food analyses.
Food Composition	This unit can be assessed holistically. Learners could be given a brief to help them concentrate on the key factors in each case. The choice of brief should reflect a number of different factors to enable learners to recognise the significance of the chemical composition of food components to food processing. Assessment can be undertaken as learners progress through the unit.
Food Hygiene Intermediate	Each outcome can be assessed individually by means of closed-book questioning or it may be possible to combine outcomes.
Hazard Analysis and Critical Control Points (HACCP)	This unit will be assessed by means of closed-book, short answer questions, carried out under controlled conditions.

6 Guidance on approaches to delivery and assessment

There is no prescribed order in which the units must be delivered and centres may develop their delivery plans to meet the need of learners. Approaches should be adapted to reflect the needs of learners and take account of their previous or current experience in the sector. Examples of the order in which units could be delivered are given in Section 6.1.

F6VL 34 — Microbiology of Foods 1 (SCQF level 7)

Delivery guidelines for the unit

Delivery should aim to help learners apply the content in the unit to the food industry. It should also build laboratory skills so that learners can approach laboratory work confidently. Delivery should aim to integrate the practical laboratory elements with the taught elements of the unit where possible.

Learners should be encouraged to take responsibility for their own learning and may be able to research for themselves some of the ways in which microbiology applies in the food industry. This could help to integrate different parts of the HNC in Food Science and Technology as learners should be able to recognise, for example, the ways in which the growth and/or inhibition microorganisms affect the methods used for processing food.

Assessment for this unit involves both practical work and explanation. Learners should be observed during some of their practical work and the observation should be recorded on a checklist (photographic and/or video evidence could be used to supplement the checklist). This will provide evidence that learners have followed proper laboratory procedures and carried out the work safely and accurately. If necessary, the observation checklists may be supplemented by additional questions. Learners must provide information on the results of practical work which could be done through a laboratory log book. Learners must be able to analyse and explain their results.

Explanation can be provided in a number of ways and assessors could choose to vary the methods to suit different groups of learners. Learners could provide a report for example which they could prepare in their own time. This report could be based on a series of open questions which may help learners to structure their responses. Another option is to ask learners to give a presentation.

The evidence should include referencing where appropriate. Again, learners could be given some open questions to help them structure their work. Learners could make use of software (such as PowerPoint) or they could develop a poster-based presentation. Whatever method is used, assessment judgments should be based on the explanation of microbiological terms and not the facility with which the learner uses the method of explanation.

For all assessment evidence, learners could be asked questions to supplement evidence provided in another form. There may be scope, depending on the way assessment evidence is generated, for learners to gather all their evidence in a portfolio which they can build as they progress through the unit.

Assessment guidelines for the unit

Learners could present evidence in a number of ways to show that they can describe the different types of microorganisms. This could take the form of a short report, an oral or poster presentation. The learners should include the roles of the microorganisms in the food industry. The evidence should include referencing where appropriate.

An observation checklist can be used to record the observation of practical work and it can cover items such as practical aseptic technique and safe laboratory practice. Photographic and/or video evidence could be used to supplement the checklist. Learners could provide information of the results of each laboratory exercise by keeping a laboratory workbook. Data generated in the practical work should be analysed by the learner. Learners could be asked questions about the work they have done to supplement the observation checklist and the information on results.

F6VB 33 — Science for the Food Industry: An Introduction (SCQF level 6)

Delivery guidelines for the unit

The delivery of this unit should take into account that will also help to prepare learners for scientifically based units in the PDA Food Science such as F6VD 34 *Food Composition*, F6VC 34 *Food Analysis* and F6VL 34*Microbiology of Foods 1*. Learners will be taking this unit because they have not achieved units in scientific subjects at SCQF level 6. It is possible that, in the past, they perhaps have found studying science difficult or uninteresting or both. Given the vital importance of scientific understanding and practical laboratory skills in the PDA in Food Science, it is important that the delivery methods adopted should engage the attention and interest of learners.

Wherever possible, delivery should encourage learners to be as active as possible. A combination of delivery methods may be one way to achieve this. This could range from direct exposition to asking learners to find out information for themselves. This could be done in groups who could be guided towards different research tasks. Groups could then share information. This can also help learners take responsibility for their own learning and help them to develop patterns of independent study. Wherever possible the material can be applied to the food industry so that learners recognise the importance of scientific knowledge and understanding to their study of food manufacturing. If learners realise this at an early stage, they are likely to approach later units with a positive attitude.

Outcome 2 covers a greater amount of material than Outcome 1 and it is likely, therefore, that, during the delivery process, learners will devote more time to the knowledge and/or skills items in Outcome 2 than to the knowledge and/or skills items in Outcome 1. For the practical laboratory skills, the aim should be to build both skills and confidence so that learners are in a strong position to undertake the practical parts of units such as F6VL 34 *Microbiology of Foods 1* and F6VC 34 *Food Analysis*.

Assessment guidelines for the unit

Assessment for this unit tests the understanding of learners and their practical work. Assessment for this unit could take a variety of ways. For example, knowledge and understanding can be assessed through questions which ask learners to explain relevant scientific concepts and, where appropriate, relate them to the food industry.

Learners could be asked to present their responses to these questions in a number of different ways, eg they could group their responses together in the form of a short report or they could prepare a simple poster presentation. Alternatively, they could make use of presentation software (such as Powerpoint) or use tools from a virtual learning environment.

Practical work can be assessed by observation and through reports on experimental work. Learners should be observed during some of their work and the observation should be recorded on a checklist (photographic and/or video evidence could be used to supplement the checklist). This will provide evidence that learners have followed proper laboratory procedures and carried out the work safely and accurately. If necessary, the observation checklists may be supplemented by additional questions.

Learners must also provide reports of their experiments as reports also form part of the assessment, with the evidence including referencing where appropriate. They could also use a laboratory notebook to do this.

Learners could submit a portfolio of work covering all the assessment for this unit. They could build the portfolio during their study of the unit. In this way, assessment can arise naturally out of the delivery process.

F6VC 34 — Food Analysis (SCQF level 7)

Delivery guidelines for the unit

Delivery should aim to build laboratory skills in learners so that their confidence in undertaking laboratory work is enhanced. Throughout, learners can be encouraged to see how their work in this Unit is important to the activities of the food industry.

This unit is closely associated with the unit, F6VD 34 *Food Composition*. If learners are taking both units, it may be appropriate to integrate the way in which they are delivered. Learners could for example complete F6VD 34 *Food Composition* and then move directly into this unit.

Ideally the theory of each technique will be discussed before any practical work is performed. Where time allows, learners could be given the opportunity to practice techniques before any formal assessed practical. The techniques used within the laboratory are transferrable and skills developed are ones used in many chemical and biological fields.

It is important to introduce learners to the idea of experimental errors and the calculation of numerical errors that impact the accuracy of analysis. Also, with some analysis in food science, the values being analysed are small so discussion around limits of detection are important, in particular where spectrophotometry is utilised.

Assessment guidelines for the unit

Assessment for this unit is based on the practical work undertaken. Learners should be observed during their work and observation should be recorded on a checklist (photographic and/or video evidence could be used to supplement the checklist). This will provide evidence that learners have followed proper laboratory procedures and carried out the work safely and accurately. If necessary, the observation checklists may be supplemented by additional questions.

Learners must also record and interpret the results of their experiments and they could use a laboratory notebook to do this. Reports should include the results of the analyses including any calculations which are necessary. The evidence should include referencing and sources of errors where appropriate. Learners should interpret the results by comparing them with the expected standard.

F6VD 34 — Food Composition (SCQF level 7)

Delivery guidelines for the unit

This unit is an applied unit that also includes significant underpinning theoretical knowledge and understanding of chemistry related to the food industry. The purpose of the unit is to enable learners to become aware of the significance of chemical structure and properties to all aspects of the food industry (including handling, storage, food processing and consumption).

The delivery of the unit should keep this purpose firmly in mind and encourage learners to see how the material can be applied to the day-to-day operations and activities of food suppliers and consumers.

Learners are not expected to undertake practical laboratory work. Field trips to the food manufacturing industry, eg abattoirs, factories, bakeries, etc will enable students to relate chemical properties of food components to food processing.

Participation in class group work, engaging students in the deconstruction of complex foods, will enable them to relate chemical structures to chemical properties, and how these relate to food manufacturing and consumption.

Assessment guidelines for the unit

Assessment for this unit focuses on the application of the knowledge and understanding of chemical structures and chemical properties. Learners are given examples of food components, and asked not only to explain their structure and properties, but also to investigate how the component affects the food industry.

Learners have to do this for a number of different components. This means, if desired, learners can carry out assessment work during the delivery of the unit. Alternatively, learners can be given a research brief towards the end of the delivery period, and asked to apply the knowledge that they have gained during their study of the unit. It would be possible, and may be desirable, to give different examples to different learners.

Learners can be encouraged to do their own research to support their investigation of the application of theoretical concepts and principles from chemistry appropriate referenced sources of information.

Learners can present their explanations for assessment in a number of ways. They could provide a report, perhaps structured around some questions that they have been given in advance. They could do a poster presentation or make use of presentation software.

F4TL 34 — Food Hygiene Intermediate (SCQF level 7)

Delivery guidelines for the unit

Teachers/lecturers responsible for the delivery of this unit should be suitably qualified, preferably with a Diploma in Advanced Food Hygiene and with knowledge of *HACCP*. Current REHIS approved text books and web based materials, or that from other recognised companies, will help with the delivery. Guest speakers may be considered, eg an Environmental Health Officer for input into legislation.

This unit is likely to form part of a group award, one in which the candidates are provided with the skills and competences necessary to become Supervisors/Managers/Middle managers. This unit is vital in order to provide them with the knowledge necessary to be responsible for food hygiene in a practical situation, including having an awareness of *HACCP* as the basis on which food safety management systems need to be designed. Candidates should be encouraged to apply their knowledge in other areas of their course (where appropriate) particularly if they are to be assessed in units that involve practical cookery. The achievement of this unit will allow candidates to apply to REHIS for their Intermediate Food Hygiene certificate, giving them dual certification.

Teachers/lecturers responsible for the delivery of this unit should be suitably qualified, and have a good working knowledge of *HACCP* and its evolution over the years. Current textbooks will help with the delivery. Guest speakers may be considered, eg an Environmental Health Officer for input to legislation or technical managers from local producers who are responsible for *HACCP* in their organisation.

Assessment guidelines for the unit

This unit will be assessed by means of closed book short answer questions, carried out under controlled conditions. The assessment for all outcomes could be combined, and it is envisaged that an assessment covering all five outcomes would last approximately 2.5 hours.

J2EE 34 — Hazard Analysis and Critical Control Points (HACCP) (SCQF level 7)

Delivery guidelines for the unit

This unit is likely to form part of a group award, one in which learners are provided with the skills and competencies to allow them to work towards becoming a Quality/Technical Supervisor/Middle manager. This unit is vital in order to provide them with the knowledge necessary to be responsible for conducting a *HACCP* study and implementing a food safety management system within a food related business.

Learners should be encouraged to apply their knowledge in other areas of a course (where appropriate) particularly if they are to be assessed in units that involve practical solutions within a food facility.

Assessment guidelines for the unit

Evidence can be generated using different types of assessment. The following is a suggestion only:

Product of work — reflective account of how you would set up a *HACCP* system for a business of your choice. Practical evidence would include:

- identification of potential food hazards within the food business
- identification of critical control points, critical limits
- how you would establish a monitoring system
- how could you verify your system
- examples of pre-requisite programmes to support the study

6.1 Sequencing/integration of units

As suggested in the section above, there are instances where delivering units concurrently, or integrated, may be possible, eg *Food Analysis* is closely associated with the *Food Composition*. If learners are taking both units, it may be appropriate to integrate the way in which they are delivered. Learners could for example complete *Food Composition* and then move directly into *Food Analysis*.

6.2 Recognition of prior learning

SQA recognises that learners gain knowledge and skills acquired through formal, non-formal and informal learning contexts.

In some instances, a full group award may be achieved through the recognition of prior learning. However, it is unlikely that a learner would have the appropriate prior learning and experience to meet all the requirements of a full group award.

The recognition of prior learning may **not** be used as a method of assessing in the following types of units and assessments:

- Certain types of assessment instruments where the standard may be compromised by not using the same assessment method outlined in the unit
- Where there are specific health and safety requirements
- Where there are regulatory, professional or other statutory requirements
- Where otherwise specified in an assessment strategy

More information and guidance on the *Recognition of Prior Learning* (RPL) may be found on our website **www.sqa.org.uk**.

The following sub-sections outline how existing SQA unit(s) may contribute to this group award. Additionally, they also outline how this group award may be recognised for professional and articulation purposes.

6.2.1 Articulation and/or progression

The units that make up this PDA also contribute to the HNC and HND in Food Science.

6.3 Opportunities for e-assessment

It is anticipated that evidence of assessment will come from a mix of directly observed performance in practical activities within a hospitality environment and assessment of underpinning knowledge. Therefore, there is scope to use online portfolio building tools as a means for learners to gather evidence for some assessments, such as their planning for and evaluation of the practical activities they will be involved in. In addition, testing of some areas of underpinning knowledge would lend themselves to online testing, for example knowledge of the role of a supervisor and the structure of the hospitality industry.

The most up to date guidance on the use of e-assessment to support SQA's qualifications is available at www.sqa.org.uk/e-assessment.

6.4 Support materials

A list of existing ASPs related to the units is available to view on SQA's website.

6.5 Resource requirements

Centres will need to be able to provide laboratory facilities, and opportunities for learners to witness at first hand industrial settings, by way of field trips to related businesses, eg bakeries, abattoirs, factories, etc.

Tutors responsible for the Food Hygiene Unit should be suitably qualified, preferably with a Diploma in Advanced Food Hygiene and with knowledge of *HACCP.*

7 General information for centres

Equality and inclusion

The unit specifications making up this group award have been designed to ensure that there are no unnecessary barriers to learning or assessment. The individual needs of learners will be taken into account when planning learning experiences, selecting assessment methods or considering alternative evidence. Further advice can be found on our website **www.sqa.org.uk/assessmentarrangements**.

Internal and external verification

All assessments used within this/these qualification(s) should be internally verified, using the appropriate policy within the centre and the guidelines set by SQA.

External verification will be carried out by SQA to ensure that internal assessment is within the national guidelines for these qualifications.

Further information on internal and external verification can be found in *SQA's Guide to Assessment* **(www.sqa.org.uk/GuideToAssessment)**.

8 Glossary of terms

Embedded Core Skills: is where the assessment evidence for the unit also includes full evidence for complete Core Skill or Core Skill components. A learner successfully completing the unit will be automatically certificated for the Core Skill. (This depends on the unit having been successfully audited and validated for Core Skills certification.)

Finish date: The end of a group award's lapsing period is known as the finish date. After the finish date, the group award will no longer be live and the following applies:

- candidates may not be entered for the group award
- the group award will continue to exist only as an archive record on the Awards Processing System (APS)

Lapsing date: When a group award is entered into its lapsing period, the following will apply:

- the group award will be deleted from the relevant catalogue
- the group award specification will remain until the qualification reaches its finish date at which point it will be removed from SQA's website and archived
- no new centres may be approved to offer the group award
- centres should only enter candidates whom they expect to complete the group award during the defined lapsing period

SQA credit value: The credit value allocated to a unit gives an indication of the contribution the unit makes to an SQA group award. An SQA credit value of 1 given to an SQA unit represents approximately 40 hours of programmed learning, teaching and assessment.

SCQF: The Scottish Credit and Qualification Framework (SCQF) provides the national common framework for describing all relevant programmes of learning and qualifications in Scotland. SCQF terminology is used throughout this guide to refer to credits and levels. For further information on the SCQF visit the SCQF website at **www.scqf.org.uk**.

SCQF credit points: SCQF credit points provide a means of describing and comparing the amount of learning that is required to complete a qualification at a given level of the Framework. One National Unit credit is equivalent to 6 SCQF credit points. One National Unit credit at Advanced Higher and one Higher National Unit credit (irrespective of level) is equivalent to 8 SCQF credit points.

SCQF levels: The level a qualification is assigned within the framework is an indication of how hard it is to achieve. The SCQF covers 12 levels of learning. HNCs and HNDs are available at SCQF levels 7 and 8 respectively. Higher National Units will normally be at levels 6–9 and graded units will be at level 7 and 8. National Qualification Group Awards are available at SCQF levels 2–6 and will normally be made up of National Units which are available from SCQF levels 2–7.

Subject unit: Subject units contain vocational/subject content and are designed to test a specific set of knowledge and skills.

Signposted Core Skills: refers to opportunities to develop Core Skills arise in learning and teaching but are not automatically certificated.

History of changes

It is anticipated that changes will take place during the life of the qualification and this section will record these changes. This document is the latest version and incorporates the changes summarised below. Centres are advised to check SQA's APS Navigator to confirm they are using the up to date qualification structure.

NOTE: Where a unit is revised by another unit:

- No new centres may be approved to offer the unit which has been revised.
- Centres should only enter candidates for the unit which has been revised where they are expected to complete the unit before its finish date.

Version Number	Description	Date

Acknowledgement

SQA acknowledges the valuable contribution that Scotland's colleges have made to the development of this qualification.

9 General information for learners

This section will help you decide whether this is the qualification for you by explaining what the qualification is about, what you should know or be able to do before you start, what you will need to do during the qualification and opportunities for further learning and employment.

The PDA in Food Science is suitable for:

- Experienced team leaders and supervisors in the food and drink manufacturing industry who have no formal qualifications.
- Those who have some experience of working in the food and drink manufacturing industry and want to develop knowledge and skills in new areas to help with career progression.
- Anyone who has completed a relevant food and drink qualification and wants to develop themselves for a career in the industry.

The following information on prior knowledge, skills, experience or qualifications that provide suitable preparation for this qualification is for guidance only. You would benefit from having attained the skills, knowledge and understanding in one or more of the following:

- Current or prior experience working in the food and drink industry
- A relevant SVQ at SCQF level 5 or above
- National Progression Award in Food Manufacture
- Foundation Apprenticeship in Food and Drink Technologies
- Different combinations of relevant national or vocational qualifications and/or equivalent qualifications from other awarding bodies

To achieve the PDA in Food Science, you will need to successfully complete the following three mandatory units:

- *Microbiology of Foods 1*
- *Science for the Food Industry: An Introduction*
- *Food Analysis*

You will also have to successfully complete one optional unit from the following list:

- *Food Composition*
- *Food Hygiene Intermediate*
- *Hazard Analysis and Critical Control Points (HACCP)*

Assessment of the units in this PDA will involve you carrying out practical activities to demonstrate your competence in the required skills and techniques and collating a portfolio of evidence and/or answering questions to demonstrate your knowledge and understanding.

While undertaking this PDA you will have the opportunity to develop the following Core Skills:

- *Communication*
- *Numeracy*
- *Information and Communication Technology (ICT)*
- *Problem Solving*
- *Working with Others*

This qualification could be undertaken as a full time, part-time or on a day release basis in a college, or in the workplace, or a combination of both.

Successful completion of this PDA could help you find employment in the food and drink manufacturing industry. The units that make up this PDA also contribute to the HNC/HND in Food Science.