Arrangements for:

National Progression Award in Food Manufacture (SCQF level 6)

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Acknowledgement

SQA acknowledges the valuable contribution that Scotland's colleges have made to the development of National Qualification Group Awards.

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.

Version number	Description	Date
04	Updates made throughout to reflect current practice.	11/03/20
03	Information on Appendices updated: Appendix 2 now Appendix 1, Appendix 3 now Appendix 2, words capitalised Appendix 4 now Appendix 3, full titles of units added Appendix 5 now Appendix 4, Progression route table amended	05/11/2014
02	Taken out Appendix 1 and changed Appendix 2 to 1, Appendix 3 to 2, Appendix 4 to 3 and Appendix 5 to 4	02.06.14

Contents

1 Introduction 5
2 Aims of the group award 5
2.1 Principal aims of the group award 5
2.2 General Aims of the group award 5
2.3 Target groups 6
2.4 Progression opportunities 6
3 Recommended access to the group award 6
4 Group award structure 7
4.1 Framework 7
4.2 Core Skills 7
5 Approaches to delivery and assessment 8
5.1 Content and context 8
5.2 Delivery and assessment 8
5.2.1 Units and topic areas 9
5.2.2 Learning activities 10
5.2.3 Distance Learning 10
5.3 Delivery of Core Skills 10
5.4 Delivery of essential skills 11
6 General information for centres 12
7 General information for Candidates 12
8 Glossary of terms 14
9 Appendices 15
Appendix 1 Map of aims to units 16
Appendix 2 Map of Core Skills to unit activities 17
Appendix 3 Potential progression routes 19

1 Introduction

This is the Arrangements Document for the National Progression Award (NPA) in Food Manufacture at SCQF level 6. This document includes: background information on the development of the Group Award, its aims, guidance on access, details of the Group Award structure, and guidance on delivery.

This NPA was developed to enable candidates to understand the principles of the food and drink manufacturing industry, its structures, processes and procedures. Through gaining knowledge and experience in various areas, candidates can improve their employment prospects in the food and drink industry or where already employed, use the qualification as Continuing Professional Development (CPD).

The units are broadly aligned to National Occupational Standards (NOS) produced by NSAFD , the Sector Skills Council for Food and Drink Manufacturing.

2 Aims of the group award

2.1 Principal aims of the group award

The principal aims of the NPA in Food Manufacture are to:

- Provide a background in food and drink manufacture related to a range of food products
- Develop a basic working knowledge of food and drink manufacturing as required by employers
- Develop knowledge of relevant legislation and how this impacts on the food and drink manufacturing industry
- Develop awareness of the commercial and social drivers that affect the food and drink manufacturing industry
- Develop understanding of how sustainability issues affect the food and drink manufacturing industry locally and on a global scale
- Facilitate progression to employment or further training within the food and drink manufacturing industry

2.2 General Aims of the group award

The general aims of the NPA in Food Manufacture are to:

- provide opportunities to develop Core Skills including *Communication, Numeracy, Information and Communication Technology (ICT), Problem Solving* and *Working with Others*
- encourage candidates to develop a positive attitude to their own learning
- enable candidates to develop skills and attitudes required for employability.
- provide opportunities for candidates to develop organisational, analytical and evaluative skills
- provide candidates with a range of learning, teaching and assessment styles which will motivate them to achieve their full potential.

2.3 Target groups

The NPA in Food Manufacture is targeted at school pupils, adult returners and those already employed in the food and drink manufacturing industry. It aims to provide learners with knowledge and skills which can be applied across a range of academic and vocational areas, and for candidates to be able use these knowledge and skills in employment.

The qualification is targeted at those seeking employment in the food and drink Manufacture industry or those already employed, with the NPA in Food Manufacture then functioning as CPD.

2.4 Progression opportunities

Progression

The course provides candidates with a range of skills which can be applied when in employment in the food and drink manufacturing industry. It can also be used as a foundation course for progression to further/higher education. In addition to specialist knowledge, the course helps to develop a range of positive personal skills and self-confidence, complementing the knowledge gained.

The course, plus relevant work experience and/or vocational awards, offers the potential for candidates to progress into further education and may provide an alternative qualification route for progression onto a degree, at the discretion of centres. Potential progression routes are given in Appendix 4.

3 Recommended access to the group award

While entry is at the discretion of the centre, it is recommended that candidates have attained one of the following, or have equivalent qualifications or, relevant experience:

- ICT at SCQF level 4
- Numeracy and Communication at SCQF level 5
- Intermediate 2 in Science or Home Economics: Health and Food Technology or National 5 in Health and Food Technology or a Science related subject at level 5.

With regard to Core Skills, as the NPA features *Information and Communication Technology (ICT)* applications, it is recommended that candidates have the Core Skill of *ICT* at Intermediate 1 (SCQF level 4), or equivalent.

4 Group award structure

4.1 Framework

All units within the course are mandatory and candidates will be awarded the National Progression Award in Food Manufacture at SCQF level 6 on successful completion them The whole course equates to 4 SQA credits of learning (24 credit points at SCQF level 6).

Unit title	Code	SCQF level	SQA credit value	SCQF credit points
Food Manufacturing: Fundamentals of Food Science	H1NE 12	6	1	6
Food Manufacturing: Food Production	H1NF 12	6	1	6
Food Manufacturing: Commercial and Social Drivers	H1NG 12	6	1	6
Food Manufacturing: Sustainability	H1NH 12	6	1	6
Total			**4**	**24**

The combination of units within the course is designed to provide a broad overview of the food manufacturing industry and to allow candidates to develop specific knowledge and skills required for employment or further study in the sector.

The content and approaches to learning and assessment of all the units can be linked directly to the principal and general aims, as outlined in section 3.

4.2 Core Skills

It is anticipated that candidates will enter with Core Skills at either SCQF level 4 or 5. There is no automatic certification of any *complete* Core Skills in any of the four units, but aspects of the Core Skills at SCQF level 6 may be developed through learning and teaching.

The component Critical Thinking (of the Core Skill of *Problem Solving*) is embedded in three of the units on the framework and is automatically certificated.

A map of Core Skills to unit activities is given in Appendix 3.

5 Approaches to delivery and assessment

5.1 Content and context

The NPA in Food Manufacture develops understanding of the principles of the food and drink manufacturing industry, its structures, and procedures. It provides an introduction to food production and to the commercial, legislative, social, management and sustainability aspects which underpin food and drink manufacture.

The course is designed to appeal to candidates both within and outside the food manufacturing industry, eg school pupils and adult returners to education. It will provide candidates with the basic food and drink manufacturing knowledge and skills beneficial for employment.

The food and drink manufacturing industry incorporates a wide and varied range of skills and knowledge relating to its various activities including market research, product development, pilot plant, preparation area, processing area, quality control, food safety, labelling and packaging and distribution.

Food Manufacture is an extensive industry and there are regional specialities in food and drink products, depending on the raw materials and local produce available. The units give an overview of many manufacturing techniques and procedures that could be tailored to local industries in any given geographical area where centres are delivering the course. This means that dependent on centres' methods, candidates completing the course can develop knowledge and skills relevant for employment in food and drink manufacturing in their local area.

The units are designed to encourage a practical and interactive approach to teaching and learning, with candidates gaining maximum benefit through a range of individual and group-based investigations and classroom discussion of the findings. For those wishing to take their studies further, the course will provide a foundation for FE/HE-level study at the discretion of the centre.

Collectively, this will stand candidates in good stead in further study, or employment.

5.2 Delivery and assessment

Delivery and assessment are intended to be 'hands-on' wherever possible, reflecting the practical nature of the Food Manufacturing Industry. A practical and interactive approach to teaching and learning should be adopted throughout ensuring that exploratory, enquiry-based, experiential learning opportunities are available to candidates, in order to exercise and develop critical thinking and practical skills. The range of methods available will be dependent on centres, the various food and drink manufacturers in the area and candidate groups, but it is intended that the units can be tailored by centres depending on these circumstances.

While all units are discrete and can be delivered on a standalone basis, if delivering the full course, it is recommended that they are taught in sequence (as per the order given in the framework). This approach will enable a coherent experience for candidates. If all units are taught in sequence, assessments can be integrated together.

There are opportunities for integrating some learning and assessment across the units, as noted in the individual specifications. For example, the data collected during the Fundamentals of Food Science unit can provide a basis for the understanding of principles and processes described in subsequent units.

A closed-book assessment is included in the Fundamentals of Food Science unit. Due to the nature of the subject, this is the most suitable approach in gauging candidates' understanding of the important principles which feed into the other subject areas of the framework. Within the closed book structure, there is still some scope for tailoring the assessment such as through restricted response or multiple-choice questions.

5.2.1 Units and topic areas

Food Manufacturing: Fundamentals of Food Science

This unit gives candidates an overview of the science and legislation underpinning the food and drink manufacturing industry.

Candidates will develop a knowledge and understanding of the chemical composition and nutritional properties of various foods. Candidates will investigate the legislation associated with the food industry including relevant food safety.

Food Manufacturing: Food Production

This unit gives candidates an overview of the structure of the food and drink manufacturing industry from 'field to table'.

The content will introduce candidates to the production operations undertaken in a range of food and drink manufacture sectors.

Food Manufacturing: Commercial and Social Drivers

This unit gives candidates an overview of the influence of the economic climate and social attitudes on the food and drink manufacturing industry.

Candidates will develop a knowledge and understanding of how consumers and retailers affect economic and social trends.

Food Manufacturing: Sustainability

This unit enables candidates to research and make an informed evaluation of the sustainability of the agricultural procedures and manufacturing processes involved in the food and drink manufacturing industry.

Candidates will research procedures for a specific food or drink product to evaluate whether the production and distribution of a food or drink product is sustainable.

Hygiene

Though basic food hygiene training is mandatory to individuals wishing to work in all areas of food handling, on its own it does not provide sufficient in-depth knowledge and skills and a dedicated hygiene unit is not included. However, incorporating food hygiene training within and across the course will produce candidates who have a more informed attitude for employment.

5.2.2 Learning activities

Where possible, learning for all four units should occur through interaction with others, undertaking activities and through the building of a portfolio of outcomes and evaluations from each unit. Candidates may benefit from:

- working in small research groups
- a basic knowledge of science based subject (this is not essential)
- presenting their findings to the class, either individually or as a group
- class discussion of findings
- working individually to produce portfolios
- research activities to locate and analyse information online
- visits from those involved in the food and drink manufacturing industry (eg manufacturing professionals, environmental health officers or local producers).

It is recommended that assessment for each unit is via the creation of individual folios, which include evidence of practical skills used and tasks completed. These may include outputs from group work but the majority of the evidence should be produced by each individual candidate.

All activities should encourage the development of self-confidence and an understanding of others. It is anticipated that discussion of candidates' experiences and findings is carried out throughout, and is used as a basis on which to build personal knowledge and experience, as well as to enable comparison with others regarding different food manufacturing procedures .

5.2.3 Distance Learning

The units in this NPA could easily be adapted to distance learning approach. This would ideally suit individuals already employed in the food industry who can access relevant manufacturing processes.

5.3 Delivery of Core Skills

The design of the NPA allows promotion of the development of Core Skills and other transferable skills through delivery and assessment of the units.

There are a range of opportunities for centres and candidates to continually work towards the development of all five Core Skills, as noted in Appendix 3. Contributing tasks which candidates may be involved in could include: research, group work, project work, contribution to the planning of activities and projects, reflecting on findings, planning steps to improve outputs and reviewing own progress and experiences.

Progress in development of Core Skills will be dependent on the centre's resources and the approaches taken to learning and teaching. Development of Core Skills should take place through learning and teaching activities, and through individual and group-based formative and summative assessment of practical activities which candidates have been involved in planning, delivering and evaluating.

The use of portfolios would enable candidates to participate in group activities and to share findings and outputs, achieving aspects of the Core Skill of *Working with Others*. More information regarding the development of Core Skills can be found in the support notes of the individual units.

5.4 Delivery of essential skills

Essential skills which may be developed during the course and for which opportunities are anticipated to occur naturally through unit delivery, include:

- Time management
- Creativity and innovation
- Analytical and interpretive skills
- Presentation skills
- Independent learning
- Resilience
- Responsibility
- Confidence
- Citizenship by making links with industry

6 General information for centres

Disabled candidates and/or those with additional support needs

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments, or considering whether any reasonable adjustments may be required. Further advice can be found on our website **www.sqa.org.uk/assessmentarrangements**.

Internal and external verification

All instruments of assessment used within this group award 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)**.

7 General information for Candidates

The National Progression Award (NPA) in Food Manufacture has been designed to provide you with a basic understanding of a range of processes and procedures carried out in the food and drink manufacturing industry.

You will learn about the chemical composition and nutritional values of foods and how these components affect the diet of different populations. You will investigate relevant food and safety legislation associated with the food and drink industry and how consumers, retailers and trends influence the foods produced. Sustainability of raw materials, manufacturing techniques and end products will be evaluated.

The structure, principles and processes of the food and drink manufacturing industry will be investigated, and a specific product followed, from the field to the table.

Through the course, you will gain a basic knowledge of the skills and experiences necessary for employment in a variety of food and drink manufacturing roles, which will enhance your potential to secure a job in the industry. In addition to specific subject knowledge, employers are seeking individuals who show initiative, motivation and other such qualities. Completion of this course will show commitment to learn and develop new skills, relevant to the food and drink manufacturing industry.

If you are already employed in the food and drink manufacturing industry, this qualification could help to develop your career further by formal acknowledgement of your skills with a nationally recognised qualification.

In partnership with relevant core qualifications and/or experience, the NPA in Food Manufacture could help you progress into a food related courses in further or higher education.

To achieve the NPA, you must pass all four of the units outlined below.

Food Manufacturing: Fundamentals of Food Science

This unit gives you an overview of the science and legislation underpinning the food and drink manufacturing industry.

You will develop a knowledge and understanding of the chemical composition and nutritional properties of various foods. You will investigate the legislation associated with the food industry including relevant food safety.

Food Manufacturing: Food Production

This unit gives you an overview of the structure of the food and drink manufacturing industry from 'field to table'.

The content will introduce you to the production operations undertaken in a range of food and drink manufacture sectors.

Food Manufacturing: Commercial and Social Drivers

This unit gives you an overview of the influence of the economic climate and social attitudes on the food and drink manufacturing industry.

You will develop a knowledge and understanding of how consumers and retailers affect economic and social trends.

Food Manufacturing: Sustainability

This unit enables you to research and make an informed evaluation of the sustainability of the agricultural procedures and manufacturing processes involved in the food and drink manufacturing industry.

You will research procedures for a specific food or drink product to evaluate whether the production and distribution of a food or drink product is sustainable.

Hygiene

Though basic food hygiene training is mandatory to individuals wishing to work in all areas of food handling, on its own it does not provide sufficient in-depth knowledge and skills and a dedicated hygiene unit is not included. However, incorporating food hygiene training within and across the course will produce candidates who have a more informed attitude for employment.

Throughout all the units you will learn via a variety of approaches, including individual and group work, with an emphasis on practical research experience.

8 Glossary of terms

SCQF: This stands for the Scottish Credit and Qualification Framework, which is a new way of speaking about qualifications and how they inter-relate. We use SCQF terminology 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: One SCQF credit point equates to 10 hours of learning. NQ Units at SCQF levels 2–6 are worth 6 SCQF credit points, NQ Units at level 7 are worth 8 SCQF points.

SCQF levels: The SCQF covers 12 levels of learning. 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.

Dedicated unit to cover Core Skills: This is a non-subject Unit that is written to cover one or more particular Core Skills.

Embedded Core Skills: This is where the development of a Core Skill is incorporated into the unit and where the Unit assessment also covers the requirements of Core Skill assessment at a particular level.

Signposted Core Skills: This refers to the opportunities to develop a particular Core Skill at a specified level that lie outwith automatic certification.

Qualification Design Team: The QDT works in conjunction with a Qualification Manager/Development Manager to steer the development of the National Certificate/National Progression Award from its inception/revision through to validation. The group is made up of key stakeholders representing the interests of centres, employers, universities and other relevant organisations.

Consortium-devised National Certificates/National Progression Awards are those developments or revisions undertaken by a group of centres in partnership with SQA.

9 Appendices

Appendix 1 Map of aims to units
Appendix 2 Map of Core Skills to unit activities
Appendix 3 Potential Progression Routes

Appendix 1 Map of aims to units

	Fundamentals of Food Science	Food Production	Commercial and Social Drivers	Sustainability
Principal aims				
1	✓	✓	✓	✓
2	✓	✓	✓	✓
3	✓	✓	✓	✓
4	✓	✓	✓	✓
5			✓	
6				✓
7	✓	✓	✓	✓
General aims				
1	✓	✓	✓	✓
2	✓	✓	✓	✓
3	✓	✓	✓	✓
4	✓	✓	✓	✓
5	✓	✓	✓	✓

Appendix 2 Map of Core Skills to unit activities

There is automatic certification of the component Critical Thinking, in three* of the units. The table below details signposting opportunities.

	Fundamentals of Food Science*	Food Production*	Commercial and Social Drivers	Sustainability*
Communication	♦ Active participation in class discussions ♦ Discussion and presentation of findings	♦ Active participation in class discussions ♦ Discussion and presentation of findings	♦ Active participation in class discussions ♦ Discussion and presentation of findings	♦ Active participation in class discussions ♦ Discussion and presentation of findings
Numeracy	♦ Handling numerical data ♦ Data quality evaluation ♦ Creation of graphical outputs	♦ Handling numerical data ♦ Data quality evaluation ♦ Creation of graphical outputs	♦ Handling numerical data ♦ Data quality evaluation ♦ Creation of graphical outputs	♦ Handling numerical data ♦ Data quality evaluation ♦ Creation of graphical outputs
ICT	♦ Internet exploration and research ♦ spreadsheet creation ♦ Creation, design and use of a database ♦ Creation of visual outputs	♦ Internet exploration and research ♦ spreadsheet creation ♦ Creation, design and use of a database ♦ Creation of visual outputs	♦ Internet exploration and research ♦ spreadsheet creation ♦ Creation, design and use of a database ♦ Creation of visual outputs	♦ Internet exploration and research ♦ spreadsheet creation ♦ Creation, design and use of a database ♦ Creation of visual outputs
Problem Solving	♦ Practical applications ♦ Planning and implementing data collection ♦ Identify a research question ♦ Planning and implementing data collection ♦ Data quality assurance ♦ Interpret findings and evaluate outputs	♦ Practical applications ♦ Planning and implementing data collection ♦ Identify a research question ♦ Planning and implementing data collection ♦ Data quality assurance ♦ Interpret findings and evaluate outputs	♦ Practical applications ♦ Planning and implementing data collection ♦ Identify a research question ♦ Planning and implementing data collection ♦ Data quality assurance ♦ Interpret findings and evaluate outputs	♦ Practical applications ♦ Planning and implementing data collection ♦ Identify a research question ♦ Planning and implementing data collection ♦ Data quality assurance ♦ Interpret findings and evaluate outputs

	Fundamentals of Food Science*	Food Production*	Commercial and Social Drivers	Sustainability*
Working with Others	♦ Small group tasks, discussion and presentations	♦ Small group tasks, discussion and presentations	♦ Small group tasks, discussion and presentations	♦ Small group tasks, discussion and presentations

Appendix 3 Potential progression routes