



Higher National Graded Unit specification

General information for centres

This Graded Unit has been validated as part of the HNC Fish Farming. Centres are required to develop the assessment instrument in accordance with this validated specification. Centres wishing to use another type of Graded Unit or assessment instrument are required to submit proposals detailing the justification for change for validation.

Graded Unit title: Fish Farming: Graded Unit 1

Graded Unit code: F52S 34

Type of Graded Unit: Project

Assessment Instrument: Investigation

Credit points and level: 1 HN credit at SCQF level 7 (8 SCQF credit points at SCQF level 7*)

**SCQF credit points are used to allocate credit to qualifications in the Scottish Credit and Qualifications Framework (SCQF). Each qualification in the Framework is allocated a number of SCQF credit points at an SCQF level. There are 12 SCQF levels, ranging from Access 1 to Doctorates.*

Purpose: This Graded Unit is designed to provide evidence that the candidate has achieved the following principal aims of the HNC Fish Farming to:

- ◆ develop technical knowledge of fish farming in accordance with career and career enhancement aspirations.
- ◆ develop knowledge and skills in collecting and evaluating information relating to the aquatic environment, fish stocks and fish production operations.
- ◆ develop the ability to apply knowledge of fish science, fish health and water resources to modern fish farming practices.
- ◆ develop Core Skills, including *IT* and *Communication*.
- ◆ develop self reliance, team working and employability skills.
- ◆ enhance candidates' prospects for employment and progression in the fish farming industry
- ◆ enable progression within SCQF.
- ◆ prepare candidates for progression to the second year of the BSc Hons. Aquaculture course at the University of Stirling.

General information for centres (cont)

Recommended prior knowledge and skills: It is recommended that the candidate should have completed or be in the process of completing the following Units relating to the above specific aims prior to undertaking this Graded Unit:

- ◆ F4N5 34 *Water Resources for Aquaculture and Fisheries*
- ◆ F4S8 34 *Fish Science: Freshwater Fish*
- ◆ F4S5 34 *Fish Health and Disease*
- ◆ D85F 34 *Using Software Applications Packages*

Core Skills: There are opportunities to develop the Core Skills of *Communication* at SCQF level 5, *Numeracy* at SCQF level 5, *IT* at SCQF level 5 and *Problem Solving* at SCQF level 6 in this Unit, although there is no automatic certification of Core Skills or Core Skills components.

Assessment: This Graded Unit will be assessed by the use of an investigation-based project. The investigation should provide the candidate with the opportunity to produce evidence that demonstrates she/he has met the aims of the Graded Unit that it covers.

Administrative Information

Graded Unit code: F52S 34
Graded Unit title: Fish Farming: Graded Unit 1
Original date of publication: August 2008
Version: 01

History of changes:

Version	Description of change	Date

Source: SQA

© Scottish Qualifications Authority 2009

This publication may be reproduced in whole or in part for educational purposes provided that no profit is derived from reproduction and that, if reproduced in part, the source is acknowledged.

SQA acknowledges the valuable contribution that Scotland's colleges have made to the development of Higher National qualifications.

Additional copies of this Graded Unit specification if sourced by the Scottish Qualifications Authority can be purchased from the Scottish Qualifications Authority. Please contact the Customer Contact Centre for further details, telephone 0845 279 1000.

Higher National Graded Unit specification: instructions for designing the assessment task and assessing candidates

Graded Unit title: Fish Farming: Graded Unit 1

Conditions of assessment

The candidate should be given a date for completion of the investigation. However, the instructions for the assessment task should be distributed to allow the candidate sufficient time to assimilate the details and carry out the assessment task. During the time between the distribution of the assessment task instructions and the completion date, assessors may answer questions, provide clarification, guidance and reasonable assistance. The assessment task should be marked as soon as possible after the completion date. The final grading given should reflect the quality of the candidate's evidence at the time of the completion date.

The evidence for the project is generated over time and involves three distinct stages, where each stage has to be achieved before the next is undertaken. Thus any re-assessment of stages must be undertaken before proceeding to the next stage.

If a candidate fails the project overall or wishes to upgrade, then this must be done using a *substantially different* project, ie all stages are undertaken using a new project, assignment, case study, etc. In this case, a candidate's grade will be based on the achievement in the re-assessment, if this results in a higher grade.

Instructions for designing the assessment task

The assessment task is an investigation-based project. The project undertaken by the candidate must be a complex task which involves:

- ◆ variables which are complex or unfamiliar
- ◆ relationships which need to be clarified
- ◆ a context which may be familiar or unfamiliar to the candidate

The assessment task must require the candidate to:

- ◆ analyse the task and decide on a course of action for undertaking the project
- ◆ plan and organise work and carry it through to completion
- ◆ identify a fish farm suitable for the investigation
- ◆ carry out research on the water and stock within the fish farm
- ◆ reflect on what has been done and draw conclusions for the future
- ◆ produce evidence of meeting the aims which this Graded Unit has been designed to cover

The brief must allow the candidates to investigate an actual fish farm. The planning and developing stages of the project will require visits to the farm in order to implement the brief and sample selected biotic and abiotic parameters. This will generate the information for the plan of action as well as the data for the investigation and evaluation reports.

Higher National Graded Unit specification: instructions for designing the assessment task and assessing candidates (cont)

The brief must cover sampling and analysis of:

- ◆ water quality within the chosen site
- ◆ measurement of water flows
- ◆ fish stocks present on site
- ◆ diet of the fish stocks present
- ◆ health of the fish stocks present

Candidates will be required to produce an Investigation Report based on the sampling and analysis carried out, and will produce an Evaluation Report based upon the investigation.

Guidance on grading candidates

Candidates who meet the minimum Evidence Requirements will have their achievement graded as C — competent, or A — highly competent or B somewhere between A and C. The grade related criteria to be used to judge candidate performance for this Graded Unit is specified in the following table.

Grade A	Grade C
<p>Is a seamless, coherent piece of work which:</p> <ul style="list-style-type: none"> ◆ has sufficient evidence for the three essential phases of the project, is produced to a high standard, and is quite clearly inter-related ◆ demonstrates an accurate and insightful interpretation of the project brief ◆ is highly focused and relevant to the tasks associated with the project brief ◆ identifies practically all of the main aspects relating to the collection and collation of data ◆ interprets and analyses practically all of the data ◆ summarises the results and encapsulates all of the salient points ◆ is clear and well structured throughout and language used is of a high standard in terms of level accuracy and technical content ◆ effectively consolidates and integrates required knowledge, and skills 	<p>Is a co-ordinated piece of work which:</p> <ul style="list-style-type: none"> ◆ has sufficient evidence of the three essential phases of the project, is produced to an adequate standard ◆ demonstrates an acceptable interpretation of the project brief ◆ is focused and relevant to the tasks associated with the project brief ◆ identifies most but not all of the main aspects relating to the collection and collation of data ◆ interprets and analyses most but not all of the data ◆ summarises the results and encapsulates some of the salient points ◆ is satisfactorily structured and language used is adequate in terms of level, accuracy and technical content ◆ consolidates and integrates knowledge and skills but this may lack some continuity and consistency

Higher National Graded Unit specification: instructions for designing the assessment task and assessing candidates (cont)

The project will be marked out of 100. Assessors will mark each stage of the project, taking into account the criteria outlined. The marks will then be aggregated to arrive at an overall mark for the project. Assessors will then assign an overall grade to the candidate for this Graded Unit based on the following grade boundaries.

A = 70% — 100%

B = 60% — 69%

C = 50% — 59%

Note: the candidate must achieve all of the minimum evidence specified below for each stage of the project in order to achieve the Graded Unit.

Evidence Requirements

The project consists of three stages: planning; developing; and evaluating. The following table specifies the minimum evidence required to pass each stage.

Note: The candidate must achieve **all of the minimum evidence** specified below for each stage of the project in order to pass the Graded Unit.

Project stage	Minimum Evidence Requirements
Stage 1 — Planning 20%	An action plan which includes: <ul style="list-style-type: none">◆ the aims of the assessment task including research, development and evaluation◆ timescales for achieving these aims◆ the rationale for selecting the site to be investigated◆ identification of the main issues of research◆ identification of the methods of research and sources to be used <p><i>The candidate must achieve all of the minimum evidence specified above in order to pass the Planning stage.</i></p>

Higher National Graded Unit specification: instructions for designing the assessment task and assessing candidates (cont)

Project stage	Minimum Evidence Requirements
Stage 2 — Developing 60%	<p>Preparing an Investigation Report which must include evidence of:</p> <ul style="list-style-type: none"> ◆ collection and collation of data relevant to the site and fish stocks ◆ interpretation and analysis of the data ◆ a summary of the results <p>The report should also include:</p> <ul style="list-style-type: none"> ◆ a contents page ◆ a list of acknowledgements and references <p>The report should contain appropriate tables and diagrams and should be approximately 1,500 words in length.</p> <p><i>The candidate must achieve all of the minimum evidence specified above in order to pass the Developing stage.</i></p>
Stage 3 — Evaluating 20%	<p>An Evaluation Report which should:</p> <ul style="list-style-type: none"> ◆ briefly outline the investigation ◆ review and update the action plan in light of experience ◆ assess the effectiveness of the research methods used ◆ summarise any unforeseen events and how they were handled ◆ assess the strengths and weaknesses of the main body of the project <p>Identify any knowledge and skills which have been gained and/or developed.</p> <p>The evaluation is worth 20% of the total mark for the investigation.</p> <p><i>The candidate must achieve all of the minimum evidence specified above in order to pass the Evaluating stage.</i></p>

Higher National Graded Unit specification: instructions for designing the assessment task and assessing candidates (cont)

Support notes

This Graded Unit is in the form of a project which is based on an investigation within a fish farm chosen by the student in conjunction with the assessor.

The investigation would cover sampling and analysis of:

- ◆ water quality within the chosen site
- ◆ measurement of water flows
- ◆ fish stocks present on site
- ◆ diet of the fish stocks present
- ◆ health of the fish stocks present

Candidates may be requested to present their plans for the project in the form of a digital presentation or in the form of a discussion session with the lecturer. Should discussion be the format then a record of the main points of discussion should be submitted.

There should be an introduction to the site with background information on the catchment area in terms of geology, size, vegetation, land use and water use.

An overview of water quality and quantity should be included together with the results of the water analysis found by the candidate.

Details of fish stocks present should include numbers, species, sizes and age.

An overview of the main disease challenges at various times of year should be included together with historical information on disease outbreaks.

The results of the investigation into diseases of the fish on site should be included.

Conclusions regarding the site should be based on the results found by the candidate.

Candidates with disabilities and/or additional support needs

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments or considering alternative assessment arrangements. For information on these, please refer to the SQA document *Guidance on Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs*, which is available on SQA's website: www.sqa.org.uk.

General information for candidates

This Unit is worth 1 HN credit at SCQF level 7.

Prior knowledge: It is recommended that you should have completed or be in the process of completing the following component Units of the HNC in Fish Farming before starting this Graded Unit:

- ◆ F4N5 34 *Water Resources for Aquaculture and Fisheries*
- ◆ F4S8 34 *Fish Science: Freshwater Fish*
- ◆ F4S5 34 *Fish Health and Disease*
- ◆ D85F 34 *Using Software Applications Packages*

Content and assessment of the Graded Unit: This Unit takes the form of a project based on an investigation that you will undertake on a fish farm chosen by you in conjunction with your tutor.

The investigation will include sampling and interpretation of:

- ◆ water quality within the chosen site
- ◆ measurement of water flows
- ◆ fish stocks present on site
- ◆ diet of the fish stocks present
- ◆ health of the fish stocks present

The investigation will have three phases: a planning stage, a developing stage and an evaluating stage. Each stage must be completed satisfactorily before you can proceed to the next stage. You will be given further details about the requirements for each stage before you start the investigation.

The planning stage is worth 20% of the total mark allocation for the whole project, the developing stage is worth 60% of the total mark allocation and the evaluating stage is worth 20% of the total mark allocation. You must satisfy the requirements of all three stages in order to pass.

The project will be marked out of 100. Assessors will mark each stage of the project and the marks will then be aggregated to arrive at an overall mark for the project. Assessors will then assign an overall grade based on the following grade boundaries.

- A = 70% — 100%
- B = 60% — 69%
- C = 50% — 59%

Core Skills: This Unit will present opportunities for you to develop the Core Skills of: *Numeracy* at SCQF level 5, *Communication* at SCQF level 5, *Problem Solving* at SCQF level 6 and *IT* at SCQF level 5, although there is no automatic certification of Core Skills or Core Skills components.