



Higher National Project-based Graded Unit Specification

General Information

This Graded unit has been validated as part of the HND Web Development. Centres are required to develop a project-based assessment in accordance with this validated specification.

Graded Unit title: Web Development: Graded Unit 2 (SCQF level 8)

Graded Unit code: HG3H 35

Type of Project: Practical Assignment

Publication date: August 2016

Source: Scottish Qualifications Authority

Version: 02

Graded unit purpose

This Graded unit is designed to provide evidence that the learner has achieved the following principal aims of the HND Web Development:

- ◆ To develop learners' knowledge and skills in planning, analysis, design, developing, testing and evaluation.
- ◆ To develop strategies for learning and encourage transferable skills including Core Skills
- ◆ To enhance employment prospects, particularly relating to the web/app, design/development and digital media/marketing industries, through engagement with National Occupational Standards.
- ◆ To enable progression within the Scottish Credit and Qualifications Framework (SCQF).
- ◆ To develop study and research skills.
- ◆ To support learners' continuing professional development.
- ◆ To provide academic motivation and challenge, and promote an enjoyment of the subject.
- ◆ To encourage learners to keep up to date with current and emerging standards and technologies using on-line and other resources.

Credit points and level

2 Higher National unit credits at SCQF level 8: (16 SCQF credit points at SCQF level 8)

Higher National Project-based Graded Unit Specification: General Information (cont)

General Information (cont)

Recommended entry to the Graded unit

It is recommended that the learner should have completed or be in the process of completing the following units relating to the above principal aims prior to undertaking this Graded unit:

F1VV 34	<i>User Interface Design</i>
HF3K 34	<i>Web Technologies 1: HTML and CSS</i>
H178 34	<i>Team Working in Computing</i>
H182 34	<i>Systems Development: User Centred Design</i>
HF3F 34	<i>Digital Graphics Fundamentals</i>
H173 34	<i>Developing Software: Introduction</i>
HF3M 35	<i>Web Technologies 2 HTML CSS and JavaScript</i>
F6C2 35	<i>Web Development: Dynamically Generated Content</i>
F6BV 35	<i>Human Computer Interface</i>
HF3D 35	<i>Designing and Developing an Interactive Product</i>

Core Skills

Achievement of this Unit gives automatic certification of the following:

Complete Core Skill	Problem Solving at SCQF level 6 Information Communication Technology at SCQF level 6
Core Skill component	None

Opportunities to develop aspects of Core Skills are highlighted in the Support Notes for this Unit specification.

Assessment Support Pack

The Assessment Support Pack for this unit provides assessment and marking guidelines that exemplify the national standard for achievement. It is a valid, reliable and practicable instrument of assessment. Centres wishing to develop their own assessments should refer to the Assessment Support Pack to ensure a comparable standard. Assessment Support Packs are available on SQA's secure website.

Equality and inclusion

This Graded unit has been designed to ensure that there are no unnecessary barriers to learning or assessment. The individual needs of learners should be taken into account when planning learning experiences, selecting assessment methods or considering alternative evidence.

Further advice can be found on SQA's website:
www.sqa.org.uk/assessmentarrangements

Higher National Project-based Graded Unit Specification: Designing the project and assessing learners

Graded Unit title: Web Development: Graded Unit 2 (SCQF level 8)

Assessment

This Graded unit will be assessed by the use of a project-based case practical assignment developed by centres. The project should provide the learner with the opportunity to produce evidence that demonstrates she/he has met the aims of this Graded unit.

The project undertaken by the learner must be a complex task which involves:

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

The project must require the learner 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
- ◆ 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.

This project requires the learner to plan, develop and evaluate a **web-based product**, such as the creation of a new website or the redesign of an existing website. At this level, the website will require to have complex elements that require **significant analysis, design, coding and testing**.

The product must be sufficiently complex to satisfy the Evidence Requirements and Grade Related Criteria defined in this specification. It must also be consistent with the SCQF level of this unit in terms of complexity and challenge. The Support Notes suggest suitable projects.

In order to meet the above criteria, the brief must differ from other practical assessments the learner has done in the Group Award. A vital part of any Graded unit is integration of knowledge and skills across component units, and this must be evident in any practical assignment used for assessment of the Graded unit.

Learners must undertake the project **individually**. All of the required stages must be undertaken by **each** learner. This will impact the scope of the project, which will necessarily be limited.

A working solution must be produced, which has involved the learner in using appropriate development languages. It would not be sufficient for a learner to focus on developing front-end content and user interface only.

Higher National Project-based Graded Unit Specification: Designing the project and assessing learners (cont)

Graded Unit title: Web Development: Graded Unit 2 (SCQF level 8)

Conditions of assessment

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

Learners must work alone on this project. However, reasonable assistance may be provided by the teacher or other learners. The amount of assistance required will affect the learner's mark (see Grade Related Criteria).

A project scenario should be provided to each learner prior to starting this unit to allow time to assimilate the requirements of the assessment.

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

The project may be carried out under supervised and/or unsupervised conditions. This is an **open-book** assessment. Assessors should use methods of authentication to ensure that evidence has been produced by learners. For example, assessors may interview learners or request a demonstration or walk-through. Any evidence that has been sourced, rather than created, by the learner should be attributed. To help with this, learners should be encouraged to list all of the resources that they have used throughout the project. Centres should ensure that where project work is carried out in other establishments, or under the supervision of others, that the learner does not receive undue assistance.

If a learner is found to have plagiarised or to have gained an unfair advantage by other means, the centre should have in place procedures for dealing with this, including the authority to deem that the learner has failed the assessment.

If a learner 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 significantly different project assessment task, assignment, case study, etc. In this case, a learner's grade will be based on the achievement in the re-assessment, if this results in a higher grade.

Remediation, re-assessment, reasonable assistance and other Project based Graded unit processes are detailed in the SQA publication *Guidance for the Implementation of Graded units in Higher National Certificates and Diplomas*, to which reference should be made.

Higher National Project-based Graded Unit Specification: Designing the project and assessing learners (cont)

Graded Unit title: Web Development: Graded Unit 2 (SCQF level 8)

Evidence Requirements for this Graded Unit

The project undertaken by learners will consist of three stages: planning; developing; and evaluating. The following table specifies the minimum evidence required to pass each stage.

Project stage	Minimum Evidence Requirements	% Mark Allocation
Stage 1 — Planning	<ul style="list-style-type: none"> ◆ Project proposal ◆ Definition of project requirements ◆ Project plan 	15%
	<i>The learner must achieve all of the minimum evidence specified above in order to pass the Planning stage.</i>	
Stage 2 — Developing	<ul style="list-style-type: none"> ◆ Design documentation ◆ Web-based product ◆ Test documentation 	70%
	<i>The learner must achieve all of the minimum evidence specified above in order to pass the Developing stage.</i>	
Stage 3 — Evaluating	<ul style="list-style-type: none"> ◆ Evaluation report including: <ul style="list-style-type: none"> — Summary of project — Extent to which solution meets the requirements — Strengths and weaknesses of the solution — Effectiveness of the development approach and process — How the process and product could be improved 	15%
	<i>The learner must achieve all of the minimum evidence specified above in order to pass the Evaluating stage.</i>	

Higher National Project-based Graded Unit Specification: Designing the project and assessing learners (cont)

Graded Unit title: Web Development: Graded Unit 2 (SCQF level 8)

Assessing and grading learners

The overall project will be marked out of **100**. Only whole marks should be used.

The percentage of marks allocated to each stage of the project is outlined in the **Evidence Requirements**.

It is a requirement that learners must meet the minimum *Evidence Requirements* for the *Planning* stage before progressing to the *Developing* stage before progressing to the *Evaluating* stage. Learners may produce evidence over and above that specified in the minimum *Evidence Requirements* and deserve more than half the available marks for that stage. Assessors should use the Grade Related Criteria outlined below to judge learner performance.

Learners are required to work independently to meet the *Evidence Requirements* of the Graded unit. At the same time, learners need appropriate support. SQA uses the term reasonable assistance to describe the balance between supporting learners in their project and not providing too much assistance.

At the end of *each* stage there should be opportunities for remediation and re-assessment of learners for that particular stage. This includes the final *Evaluation* stage. Any re-assessment should be carried out in line with the centre's own assessment policy.

Grade Related Criteria	
Grade A	Grade C
<p>Is a seamless, coherent piece of work which:</p> <ul style="list-style-type: none"> ◆ has complete evidence for all three stages of the project, produced to a high standard, and is clearly inter-related. ◆ demonstrates the learner's ability to work with minimum support and infrequent revision. ◆ demonstrates an accurate and insightful interpretation of the project brief which incorporates extensive background research. ◆ is clear and well-structured throughout and language used is of a uniformly high standard in terms of level, accuracy and technical content. ◆ demonstrates highly developed technical skills in the production of a complex web-based product. 	<p>Is a co-ordinated piece of work which:</p> <ul style="list-style-type: none"> ◆ has complete evidence for all three stages of the project, produced to an adequate standard. ◆ demonstrates the learner's ability to work with limited support and occasional revision. ◆ demonstrates an acceptable interpretation of the project brief with adequate background research. ◆ is satisfactorily structured throughout and language used is adequate in terms of level, accuracy and technical content. ◆ demonstrates adequate technical skills in the production of a routine web-based product.

Higher National Project-based Graded Unit Specification: Designing the project and assessing learners (cont)

Graded Unit title: Web Development: Graded Unit 2 (SCQF level 8)

Grade Related Criteria (cont)	
Grade A	Grade C
<ul style="list-style-type: none"> ◆ demonstrates creativity in the design and creation of the web-based product. ◆ demonstrates good time management and working practices. 	<ul style="list-style-type: none"> ◆ demonstrates some originality in the design and creation of the web-based product. ◆ demonstrates adequate time management and working practices.

The above table defines the criteria for achieving grade A and grade C. Grade B should be interpolated between these two grades.

The Grade Related Criteria should be applied to the Evidence Requirements **holistically** not atomistically. The (relevant) criteria should be applied to each stage of the project to derive a mark for that stage. Some criteria will apply to all stages (such as those relating to independent working and time management) and some will apply to specific stages (such as the criterion relating to creativity, which applies to the development stage only).

All of the Grade Related Criteria must be included in any marking instructions. However, some criteria are more significant than others. For example, the criteria relating to technical skills and creativity are more significant than those relating to working practices and the use of language; this should be reflected in the marking instructions.

The Support Notes provide further details and examples of how the Grade Related Criteria can be used to grade (mark) learners' evidence.

A specific approach to marking, using this design, is provided in each Assessment Support Pack.

The marks allocated to each stage will then be aggregated to arrive at an overall mark for the project. Assessors will then assign an overall grade to the learner for this Graded unit based on the following grade boundaries.

A = 70%–100%
 B = 60%–69%
 C = 50%–59%

These grade boundaries are fixed and should **not** be amended.

If a learner does not achieve a pass or wishes to upgrade, then this must be done using a substantially different project, ie all stages are undertaken using a new project (case study, investigation or practical assignment). In these circumstances, the highest grade achieved should be awarded.

More information on reasonable assistance, remediation and re-assessment may be found in the SQA publication *Guidance for the Implementation of Graded units in Higher National Certificates and Diplomas* (SQA, 2008, Publication code: CA4405).



Higher National Project-based Graded Unit Support Notes

Graded Unit title: Web Development: Graded Unit 2 (SCQF level 8)

Guidance on approaches to delivery and assessment of this Graded unit

The following guidance is intended to support lecturers on specific aspects of implementing this Graded unit such as planning, timing, delivery and assessment. It is illustrative and not mandatory.

Planning the Graded unit

It is recommended that learners are briefed about the Graded unit at the start of the HND. This does not mean that they are given the assessment at that time, which should be issued nearer the time of delivery.

At the start of the session they should be made aware of key factors such as the purpose, aim, underpinning units and importance of the grades for progression to employment and further study. Raising awareness at this time would help them devise ideas as they study the underpinning units. It may be useful for learners to carry out a self-evaluation of what they have done in the underpinning units and how they would like to develop further, just prior to starting the Graded unit.

All lecturers delivering the Group Award should be aware of the importance of the unit and the standards required. It is important that they know that learners can only be given reasonable assistance, which should preferably be given by the assessor for the unit, ie they cannot get help in other classes to build their application. It is recommended that learners have an input to the brief(s) and come to a consensus about the assessment. This would also be a good time to plan methods of authenticity that will be used to check evidence that learners have produced out with the class.

Further information to help planning can be found in *Guidance for the Implementation of Graded units in Higher National Certificates and Diplomas* (April 2008 at the time of writing) and *Guide to Assessment* (July 2015 at the time of writing).

Sequence of delivery

It is recommended that this Graded unit is delivered in the final term (block/semester) of the HND, so that the learners have completed most, if not all, of the underpinning units. It would be preferable for them to have completed all of the underpinning units before starting this, as delivering them in tandem can create an extra challenge for learners and result in them missing out key knowledge and skills that they could have applied. At the very least they should have completed:

HF3M 35	<i>Web Technologies 2 — HTML CSS JavaScript</i>
F6C2 35	<i>Web Development: Dynamically Generated Content</i>
HF3D 35	<i>Designing and Developing an Interactive Product</i>

Higher National Project-based Graded Unit Support Notes (cont)

Graded Unit title: Web Development: Graded Unit 2 (SCQF level 8)

Timing

As already stated, it is recommended that this unit should be delivered towards the end of the HND as it is the summative assessment of the Group Award. One hundred and sixty hours of study is required for the 16 SCQF credits at level 8. This is typically distributed as follows:

- ◆ 72 hours delivery in a timetabled class, ie 4 hours per 18 week semester or 6 hours a week per 12 week block. This helps with assessing and supporting learners.
- ◆ 88 hours self-study time.

It is recommended that the instrument of assessment is issued to learners before they start the unit, to help them digest the requirements and start to plan it. For example if they start the unit in Semester 2, it could be issued to them towards the end of Semester 1.

The amount of time given to each stage is at the discretion of the centre. The marks for each section suggest that most of the time should be spent on Stage 2. The time allocated could be proportionate to the marks available:

- ◆ Stage 1 — 16 hours
- ◆ Stage 2 — 128 hours
- ◆ Stage 3 — 16 hours

It is recommended that the assessor sets specific deadlines for each stage. These should be negotiated with learners, collectively or individually. Time management (and other working practices) is a grading criterion, so if a learner regularly fails to meet target dates this would adversely affect his/her grade.

Marking and remediation should be carried out at the end of each stage since learners must pass each stage before progressing to the next. If the unit has been selected for internal verification this should ideally take place during the transition period between each stage. Times have to be planned to accommodate all of these factors.

Assessment

This unit should not be cross assessed with other units. However, learners should be encouraged to draw on work they have produced in other units and use this as a template. If that approach is used, the end result should show evidence of how they have further developed their skills and made any required improvements. Learners could use assessor feedback from underpinning units to help them.

The assessment task should be a suitable selection, not necessarily all, of the minimum Evidence Requirements from the mandatory units. The Graded unit is a summative assessment of the Group Award therefore the task must not ask learners to do something that they have not been taught in the mandatory units. Learners should still be encouraged to extend their knowledge and skills, but this is not mandatory to achieve the Graded unit.

Higher National Project-based Graded Unit Support Notes (cont)

Graded Unit title: Web Development: Graded Unit 2 (SCQF level 8)

The project should allow learners to focus on their strengths and areas of interest. The focus should be on the quality of work produced more so than the quantity therefore learners are not expected to produce large scale websites or applications. It is more feasible for them to produce smaller projects that are realistic for one developer. It is important that the 160 hours of effort, required to attain the 16 SCQF credits points, have been applied and are evident. The project brief must therefore be complex enough to allow for this.

Typical examples for the project brief include (but are not limited to):

- ◆ dynamic website including the database
- ◆ browser based app or native app
- ◆ extensive redesign and development of an existing website
- ◆ production of work for a real client — careful management of client and learners expectations usually needs to be applied in these cases
- ◆ an innovative idea of their own for web content

It is recommended that the brief puts the learner in the role of a web development team member. The assessment task could provide a selection of typical team member roles for the learner to choose one from. At the end of the project learners would evaluate whether they were suited to this role and if they want to pursue this as a career.

It is recommended that regular one-to-one progress interviews take place with the assessor and learner to check their progress and give any reasonable assistance. Ideally this would be every week in the Graded unit class. The assessor could keep a brief record of this and use this to help award the grade. The timetabled class is also ideal for the assessor to observe learners producing the evidence themselves and give real-time feedback. Both these approaches help to ensure authenticity and provide opportunities to support learners and review their assessment plans, as per criteria 3.3 of Qualification Verification visits www.sqa.org.uk/files_ccc/QV_Guide_centres_2015-18.pdf.

When learners seek assistance from members of staff in the centre, the assessor must be informed about this. A record of the assistance given should be kept and used as evidence to help with grading. This also applies if a learner has used a third party to create assets for their product. The assessor and learner must ensure that this adheres to the standards of the Graded unit.

Throughout the assessment it is recommended that learners keep a record of their progress. For example diaries and/or blogs could be used, particularly to manage self-study time. Another approach is to have a live working version of the project plan they devised in Stage 1. The updated and original plans can then be compared during the Evaluation stage and used as evidence for managing the project. Learners should be encouraged to note all the sources of information they used for the project and state these. All these approaches can be used as evidence for Stage 3.

Higher National Project-based Graded Unit Support Notes (cont)

Graded Unit title: Web Development: Graded Unit 2 (SCQF level 8)

Recommendations for presenting the evidence for each stage are:

Stage 1 — documentation and/or presentation and a project plan.

Stage 2 — demonstration to assessor in addition to hard/digital copies of all files used to create the product. Alternatively the assessor can review and mark the evidence first then question the learner.

Stage 3 — documentation and/or presentation and the revised version of the project plan.

Resources

All the required hardware and software must be made available in the centre for the learner to meet the requirements of the assessment. This will vary dependent on the brief. It is important that current tools and technologies are used, which will help prepare learners for the workplace and further education. Secure storage should be available and a backup facility should be used by learners.

Learners should be encouraged to use the teaching materials from the underpinning units. There are numerous reliable online resources for learning about web development, such as www.w3schools.com, www.w3.org and www.codeacademy.com. Journals and books/ebooks that professionals use should be encouraged.

Examples of evidence

This is likely to change over time and will depend on the nature of the product. Learners are expected to draw on the Outcomes and Evidence Requirements of the underpinning units and apply the relevant ones to the project. Assessors must refer to these units for guidance.

Guidance on grading and marks allocation

Always refer to the latest version of the SQA publication *Guidance for the Implementation of Graded units in Higher National Certificates and Diplomas* prior to the delivery of this Graded unit.

For project-based Graded units, it is a requirement that learners must pass the Planning stage before progressing to the Developing stage, and must pass the Developing stage before progressing to the Evaluating stage. This means that assessors must be satisfied that learners have met the minimum Evidence Requirements for each stage before progressing to the next.

There will be an indication at each stage of how well a learner is performing. Feedback to learners will be part of the on-going monitoring process to ensure each learner has passed the stages necessary for progression. Therefore, a learner may have some idea of their expected grade. When giving feedback to learners, it is highly recommended that it is grading that is discussed and not individual marks.

Higher National Project-based Graded Unit Support Notes (cont)

Graded Unit title: Web Development: Graded Unit 2 (SCQF level 8)

Guidance on Grade Related Criteria

This guidance is intended to give further detailed advice on differentiating between a grade A and grade C learner.

*'Has complete evidence for all three stages of the project, produced to a **high standard**, and is **clearly inter-related**' (grade A) compared with 'Has complete evidence for all three stages of the project, produced to an **adequate standard**' (grade C).*

Note that complete evidence is required for either grade. Learners may not progress from one stage to the next without: (1) providing complete evidence for that stage; and (2) gaining at least grade C (50%) for that stage.

A grade A learner will ensure that the evidence produced is detailed, relevant and high quality. It will indicate a wide range of research and investigation, significant effort through design and implementation. The evidence will be submitted in a coherent manner ensuring each requirement is addressed fully and has a logical structure. A grade C learner will produce sufficient evidence to meet minimum Evidence Requirements, show that there has been contribution to design and implementation although the content and quality of their final project will likely be inconsistent.

*'Demonstrates the learner's ability to work with **minimum support and infrequent revision**' (grade A) compared with 'Demonstrates the learner's ability to work with **limited support and occasional revision**' (grade C).*

This statement is intended to distinguish between a motivated learner who works autonomously, only seeking minimal reasonable assistance such as asking for clarity on the assessment tasks and for technical help if there is a serious issue with the system (grade A) compared with an individual who adopts a passive role and, has been given reasonable support a few times and/or has had occasional remediation (grade C). During the support it is likely that this learner will demonstrate uncertainty of rudimentary Knowledge and/or Skills, on several occasions. In all cases there may times when there are serious issues with systems that can only be fixed by the Assessor or centres technicians, eg problems with emulators running due to system conflicts. Learners should not be penalised in these cases.

*'Demonstrates an **accurate and insightful** interpretation of the project brief which incorporates **extensive** background research' (grade A) compared with 'Demonstrates an **acceptable** interpretation of the project brief with **adequate** background research' (grade C).*

Adequate research could be one interview with the client that gives the learner sufficient information to let them develop the brief. Extensive research would go beyond that, eg researching the subject area, clients' competitors, relevant development technologies, accessibility, UX (user experience).

*'Demonstrates **highly developed** technical skills in the production of a **complex** web-based product' (grade A) compared with 'Demonstrates **adequate** technical skills in the production of a **routine** web-based product' (grade C).*

Higher National Project-based Graded Unit Support Notes (cont)

Graded Unit title: Web Development: Graded Unit 2 (SCQF level 8)

*'Demonstrates **creativity** in the design and creation of the web-based product' (grade A) compared with 'Demonstrates **some originality** in the design and creation of the web-based product' (grade C).*

Both of these criteria relate to the development stage (Stage 2) only. The first criterion is intended to differentiate between a learner who can evidence a high level of competence of the development language(s) taught in the course, leading to production of a web based product (Grade A). They may also demonstrate extended learning through their own self development, though this is not mandatory. A Grade C learner will produce a web based product that only evidences the basic knowledge and skills taught in the course.

Creative skills are not restricted to visual aesthetics. Creativity also comes in the form of the idea behind the product, engaging the user, or the code used to create it.

Highly developed skills would be from the range of mandatory skills in the Group Award. Learners would demonstrate a high level of competence, possibly going beyond the level of knowledge and skills taught. This is not mandatory though. Learners demonstrating adequate skills will have produced the minimum standard required on several occasions.

The rest of the Guidance to Grading Criteria is generally self-explanatory. There are a few other points to clarify.

Stage 1

Better plans would reflect typical tasks in a development lifecycle not just a list of the minimum Evidence Requirements.

Stage 2

Most of the marks for Stage 2 should be awarded for the working product. The recommendation is 50 marks. A few errors in code are acceptable if this still gives a good indication of how the product should work, however, this is likely to affect the grade.

Innovation is encouraged however, this cannot be the sole and only criteria to award an A grade. The purpose of the unit is to assess how well learners can apply the mandatory knowledge and skills they have learned in the HND.

Stage 3

A Grade A learner will produce a high standard of evidence for the evaluation which will have a lot of good supporting evidence such as a good quality ongoing blog or diary throughout the assessment, an accurate updated project plan, good end user feedback, evidence of resources and online tutorials used. A Grade C learner will have adequate evidence and possibly backfill diary entries and not have kept a record of all resources use.

If plans change and contingencies have been applied then the final grade should not be affected. A lower grade is likely to be awarded where plans have not been adhered to throughout the project and there has been no contingency.

Higher National Project-based Graded Unit Support Notes (cont)

Graded Unit title: Web Development: Graded Unit 2 (SCQF level 8)

Opportunities for developing Core and other essential skills

This Unit has the Core Skill of Problem Solving and Information Communication Technology embedded in it, so when learners achieve this Unit their Core Skills profile will be updated to show that they have achieved Problem Solving and Information Communication Technology at SCQF level 6.

Opportunities exist to develop the following **Core Skill elements**. Please refer to the Core Skills specifications for further information. At the time of writing this is at <http://www.sqa.org.uk/sqa/37863.html>.

- ◆ **Working with Others (SCQF level 6)**
 - Both elements if a team approach is used.
- ◆ **Communication (General Skills)**
 - Oral Communication — Produce and respond to oral communication on a complex topic.
 - Written Communication (Writing) — Produce well-structured written communication on complex topics.

National Occupational Standards (NOS)

At the time of writing the Graded unit relates to elements of the Tech Partnerships IT User NOS and IT Professional NOS, and Creative Skillsets Interactive Media and Computer Games NOS.

IT User — elements of *Digital Information*, *Digital Applications*, *Digital Content* and *Digital Data*.

IT Professional — elements of *Architecture, Analysis and Design* and *Solution Development and Implementation*.

Interactive Media and Computer Games mainly:

- ◆ *Use mark-up in interactive media products*
- ◆ *Use style sheets in interactive media products*
- ◆ *Use scripting languages in interactive media products*
- ◆ *Use programming languages in interactive media products*
- ◆ *Optimise web pages for search engines*
- ◆ *Devise and evaluate user testing of interactive media products*
- ◆ *Conduct user testing of interactive media products*
- ◆ *Manage intellectual property rights.*

Higher National Project-based Graded Unit Support Notes (cont)

Graded Unit title: Web Development: Graded Unit 2 (SCQF level 8)

Please refer to current versions of these NOS for more information. At the time of writing these can be found at the following URLs:

Interactive Media and Computer Games National Occupational Standards:
http://standards.creativeskillset.org/assets/0000/0876/Full_Suite_IMCG_Approved_Feb_2013.pdf

IT Professional Standards:
<https://www.thetechpartnership.com/standards-and-quality/it-professional-standards/>

Broader Skills Development

Broader skills development relates to enterprise, employability, sustainable development and citizenship. These are the key skills of SQAs Essential Skills. At the time of writing further information can be found at:

www.sqa.org.uk/files_ccc/SQA_ESSENTIAL_SKILLS_Leaflet.pdf.

Learners develop their employability skills throughout the unit. Enterprise, sustainable development and citizenship can all be developed depending on the topic used for the project. For example a web app to help the public find information could cover aspects of citizenship. An innovative idea could be an enterprising and sustainable development. These examples are not exhaustive and will change with time.

The Microsoft Imagine Cup series of annual competitions relates to aspects of these broader skills. At the time of writing there are competitions for Innovation and World Citizenship. Further information can be found at <https://www.imaginecup.com/>. Most of these are team, but the Graded unit could be used as an in-house competition to select the team members or if a team approach is used to assess the unit, as the product entering the competition.

This Unit has the Core Skill of Problem Solving and Information Communication Technology embedded in it, so when learners achieve this Unit their Core Skills profile will be updated to show that they have achieved Problem Solving at SCQF level 6 and Information Communication Technology at SCQF level 6.

History of changes to Graded unit

Version	Description of change	Date
02	Core Skill Problem Solving at SCQF level 6 and Information Communication Technology at SCQF level 6 embedded.	16/11/2016

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General information for learners

Graded Unit title: Web Development: Graded Unit 2 (SCQF level 8)

This unit has been designed to help you achieve the principal aims of the HND Web Development award and to assess your knowledge and skills relative to the mandatory subjects of the course framework. It is recommended that you should have completed or be in the process of completing the following units prior to undertaking this Graded unit:

HF3M 35	<i>Web Technologies 2 — HTML CSS and JavaScript</i>
F6C2 35	<i>Web Development: Dynamically Generated Content</i>
F6BV 35	<i>Human Computer Interface</i>
HF3D 35	<i>Designing and Developing an Interactive Product</i>

The assessment is a project based practical assignment, whereby you will be required to analyse, plan, design, develop, test and evaluate a small scale web-based product and then complete a self-evaluation. The project brief may be provided to you or alternatively you may use a brief of your own choosing providing it meets the criteria of the project and is approved by the assessor. The project may require you to work with an external client.

When you are given the assessment task instructions you will also be given a date for submission of the practical assignment. During this time you may ask you tutors for clarification, guidance and reasonable assistance.

There are three stages and each stage has allocated marks as follows:

- ◆ Planning — 15 marks
- ◆ Developing — 70 marks
- ◆ Evaluating — 15 marks

You must pass each stage, in order, before proceeding to the next. To pass a stage you must have submitted and passed all the minimum evidence required for that stage. Your tutor will give you further information of what minimum evidence is required for each stage. Successful achievement of the unit will be graded, based on the final mark attained as follows:

- ◆ Grade A: 70–100%
- ◆ Grade B: 60–69%
- ◆ Grade C: 50–59%

This grade will apply only to the Graded unit and not to the Group Award as a whole. Grades are subject to external verification by SQA. Any remediation will affect your chance of getting an A grade.

Arrangements for remediation and re-assessment will be in line with your centre's policy, however, if for any reason you were to be unsuccessful in the project overall, re-assessment must be on a substantially different project. It should be noted that your centre may not be able to provide the opportunity to undertake a substantially different project within the same academic year.

This Unit has the Core Skill of Problem Solving and Information Communication Technology embedded in it, so when you achieve this Unit your Core Skills profile will be updated to show that you have achieved Problem Solving and Information Communication Technology at SCQF level 6.