



Higher National Project-based Graded Unit Specification

General Information

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

Graded Unit title: Digital Design and Development: Graded Unit 2
(SCQF level 8)

Graded Unit code: HG3F 35

Type of Project: Practical Assignment

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Version: 03

Graded Unit purpose

This Graded Unit is designed to provide evidence that the learner has achieved the following principal aims of the HND Digital Design and 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)

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:

HF55 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>
HF53 35	<i>Interactive Media Composition</i>
HF52 35	<i>Human Computer Interface</i>
HF3E 35	<i>Developing Digital Media for an Interactive Product</i>
HF3D 35	<i>Designing and Developing an Interactive Media Product</i>

Core Skills

Achievement of this Unit gives automatic certification of the following:

Complete Core Skill	Problem Solving at SCQF level 6 Information and 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 our website: www.sqa.org.uk/assessmentarrangements

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

Assessment

This Graded Unit will be assessed by the use of a project-based *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, design and develop an **interactive product** that includes a range of media types, implementing and integrating the technical knowledge and skills gained throughout their course.

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.

Each learner should undertake an **individual** project which encompasses all of the knowledge and skills which would be required to complete a **small-scale interactive media product** and which includes the sourcing and creation of digital media content.

The project should provide opportunities for learners to develop and promote forward- looking, innovative and aspirational approaches to their work. If a learner focuses on asset creation or front end design an acceptable level of knowledge and skills relating to interactivity must also be evident.

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

- ◆ Browser based or native app
- ◆ Computer game
- ◆ Interactive TV application/product
- ◆ Standalone application
- ◆ Virtual reality product
- ◆ Interactive multimedia application
- ◆ Scripted digital artefacts in a virtual world
- ◆ Website that requires front-end coding and bespoke digital media content

All assignments must present an approximately equal level of demand, irrespective of the technologies involved. It is not acceptable to produce 'complex looking' products that are largely derived from automated software. Conversely, it may be acceptable to create a product that appears to be non-complex but was generated using complex tools and technologies.

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

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.

Reasonable assistance is the term used by SQA to describe the difference between providing learners with some direction to generate the required evidence for assessment and providing too much support, which would compromise the integrity of the assessment. Reasonable assistance is part of all learning and teaching processes. In relation to the assessment of Higher National Project-based Graded Units, assessors may provide advice, clarification, and guidance during the time between the distribution of the project instructions and the completion date, ie at each stage of the project.

Remediation allows an assessor to clarify learner responses, either by requiring a written amendment or by oral questioning, where there is a minor shortfall or omission in evidence requirements. In either case, such instances must be formally noted by the assessor, either in writing or recording, and be made available to the internal and external verifier. In relation to Higher National Project-based Graded Units, learners must be given the opportunity for remediation at each stage of the project.

The evidence for a Higher National Project-based Graded Unit is generated over time and involves three distinct stages, each of which has to be achieved before the next is undertaken. This means that any re-assessment of stages must be undertaken before proceeding to the next stage. The overall grade is derived from the total number of marks across *all* sections, and should reflect the ability of the learner to work autonomously and the amount of support required. In relation to Higher National Project-based Graded Units, learners who have failed any stage of the project and have been unable to provide the necessary evidence through remediation must be given the opportunity for re-assessment of that stage.

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 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 and has not be plagiarised. 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 the resources they have used throughout the project. Centres should ensure that where research, etc. 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.

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 ◆ Digital product ◆ Testing 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>	

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- ◆ demonstrates the learner's ability to work with minimum support and infrequent ◆ 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 ◆ demonstrates highly developed technical skills in the production of a complex digital product. ◆ demonstrates creativity in the design and creation of the digital product. ◆ demonstrates good time management and working practices. 	<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 ◆ demonstrates the learner's ability to work with limited support and occasional ◆ 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 digital product. ◆ demonstrates some originality in the design and creation of the digital 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%

Any learner who has failed their graded unit or wishes to upgrade their award must be given a re-assessment opportunity, or in exceptional circumstances, two re-assessment opportunities. In the case of project-based graded units, this must be done using a substantially different project.

The final grading given must reflect the quality of the learner's evidence at the time of the completion of the graded unit. Learners must be awarded the highest grade achieved — whether through first submission or through any re-assessment, remediation, and/or reasonable assistance provided.

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

Higher National Project-based Graded Unit Support Notes

Graded Unit title: Digital Design and 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 can't 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.

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 generally 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:

HF53 35 *Interactive Media Composition*
HF3E 35 *Developing Digital Media for an Interactive Product*
HF3D 35 *Designing and Developing an Interactive Product*

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 in the last couple of weeks 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 deadlines for each stage. Alternative approaches could be deadline periods of time set by the assessor or learners setting their own deadlines if the assessor thinks they are realistic. However, there could be several issues with this approach, eg managing authenticity of evidence and the marking and internal verification of each stage.

Marking and any remediation and/or re-assessment has to be carried out when each stage is submitted as learners have to pass each stage to progress to the next. If the Unit has been selected for internal verification this should ideally take place during the transition period between each stage. Timing has to be planned to accommodate all 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.

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.

Learners should only seek reasonable assistance from other members of staff at the Centre if the assessor knows about this. A record of the reasonable assistance given should be kept 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 learners should keep their own 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 hard evidence for Stage 3.

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/soft 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.

Possible projects should be selected and assessed based on their suitability for this level of study. It is expected that potential projects will require learners to utilise a number of skills from the pre-requisite Units (listed above) and demonstrate the learner's ability to create an interactive product suitable to a given brief. Examples of possible projects include:

- ◆ Browser based or native app
- ◆ Computer game
- ◆ Interactive TV application/product
- ◆ Standalone application
- ◆ Virtual reality product
- ◆ Interactive multimedia application
- ◆ Scripted digital artefacts in a virtual world
- ◆ Website that requires front-end coding and bespoke digital media content

This list is not exhaustive and any other digital product which exhibits interactivity may also be considered. When selecting a project it is advisable to ask for the learner's input where this is possible and practical. Learners may have their own ideas on how best to fulfil a brief which should be taken into consideration and emphasis should be placed on them to come up with a creative solution.

Ideally learners would be expected to engage with external clients where possible — if this approach is used learners should be thoroughly briefed on how to handle problematic or non-responsive clients. This may involve the intervention of the person delivering the Unit to ensure that the project still remains achievable when issues with external clients arise. It should be made clear to learners that lack of communication from a client is not an excuse for late or non-submission of each section of the project. Learners should also be encouraged to raise concerns with the person delivering the Unit as soon as they arise.

As the Unit places a significant amount of emphasis on independent study, regular progress meetings should be held between the learner and the person delivering the Unit. These meetings should provide the learner with a structure and goal setting at each meeting is strongly

advised. This will ensure that the assessor is also able to keep track of the learner's progress throughout the project and identify potential problem areas as soon as they arise. If these meetings are documented then they can also prove useful at the evaluation stage where learners are expected to reflect on their progress and how well they managed their time throughout the project.

It is recommended that learners are asked to keep a record of the development process underpinning the implementation of the product. It is highly advisable that learners keep a regular diary or log book during the implementation phase which can be used as evidence of this. Notes from any meetings relating to the project can be included here but it is also recommended that learners document progress of the implementation and any technical issues on a weekly basis. Assessors may also wish to review these during progress meetings to ensure the learner is up-to-date with this aspect of the assessment. Emphasis should not be placed on the quantity of any written updates but on the accuracy, relevance and regularity of log entries.

Peer-review and evaluation can be a useful tool for learners working on an extended project. This could be formalised as dedicated peer-review sessions where learners are asked to present their designs or products to their peers inviting feedback, or it may occur naturally amongst a group of students. This practice is advised throughout the project lifecycle as it allows learners to better assess the validity of their ideas and would be normal practice within a workplace environment. It also gives learners additional materials when they are asked to evaluate and reflect on their project.

However, where students are working on the same project care should be taken to avoid the risk of plagiarism and it should be emphasised that all work must be their own. 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. Learners should provide references in the form of footnotes and/or bibliography for any materials used and/or accessed which is not their own.

Guidance on grading and marks allocation

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.

Guidance on Grade Related Criteria

This guide 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).

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).*

'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 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 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 what they have learned in the HND.

Stage 3

An 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.

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*
- ◆ *Devise and evaluate user testing of interactive media products*
- ◆ *Conduct user testing of interactive media products*
- ◆ *Manage intellectual property rights.*

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 and Information Communication Technology at SCQF level 6.

History of changes to Graded Unit

Version	Description of change	Date
02	Core Skill Problem Solving and Information and Communication Technology at SCQF level 6 embedded.	16/11/2016
03	Update of Conditions of Assessment	25/07/2018

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FURTHER INFORMATION: Call SQA's Customer Contact Centre on 44 (0) 141 500 5030 or 0345 279 1000.

General information for learners

This Unit has been designed to help you achieve the principal aims of the HND Digital Design and 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:

HF55 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>
HF53 35	<i>Interactive Media Composition</i>
HF52 35	<i>Human Computer Interface</i>
HF3E 35	<i>Developing Digital Media for an Interactive Product</i>
HF3D 35	<i>Designing and Developing an Interactive Media 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 digital 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 your 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 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.