Higher National Examination-based Graded unit Specification

General Information

This Graded unit has been validated as part of the HNC Digital Design and Web Development. Centres are required to develop the assessment instrument in accordance with this validated specification.

Graded unit title: Digital Design and Web Development:
                                        Graded unit 1 (SCQF level 7)

Graded unit code: HG2V 34

Type of Examination: Closed-book

Publication date: July 2018

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 HNC Digital Design and Web Development:

♦   To develop learner knowledge and skills in planning, analysis, design, developing, testing and evaluation.
♦   To develop study and research skills.
♦   To enable progression within the Scottish Credit and Qualifications Framework (SCQF).
♦   To provide academic motivation and challenge.

Credit points and level

1 Higher National unit credit at SCQF level 7: (8 SCQF credit points at SCQF level 7)

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:

H173 34   *Developing Software: Introduction*
HF3F 34   *Digital Graphics Fundamentals*
H182 34   *Systems Development: User Centred Design*
F1VV 34   *User Interface Design*
HF3K 34   *Web Technologies 1: HTML and CSS*

Core Skills

There are no Core Skills embedded in this Graded 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 Examination-based Graded unit Specification: Designing the examination and assessing learners

Graded unit title: Digital Design and Web Development: Graded unit 1 (SCQF level 7)

Assessment

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

The assessment is an examination lasting **three hours**.

The examination should be designed to assess the learner's critical knowledge and understanding of the topics relating to the specific aims which this Graded unit is designed to cover.

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

The questions and corresponding marks should be designed in accordance with the key topics (ie the critical knowledge and skills to be covered in the examination), level of demand (eg description, explanation, analysis, application) and relative mark allocation for each key topic outlined in the table below.

Key topics	Level of demand	% mark allocation for each key topic
Computer programming concepts	**Description and explanation.** Programming constructs and testing	10
User-centred design process	**Description, explanation and evaluation.** Requirements, analysis, design and evaluation	25
User interface design	**Description, explanation and evaluation.** Colour theory, fonts, graphic design principles and elements for digital media	25
Digital graphics	**Description and explanation.** Types, formats, uses, sources, copyright and optimisation	20
Hypertext Markup Language and Cascading Style Sheets	**Description, explanation and application.** Interpretation of HTML/CSS code and testing	20
Total marks for Examination		**100**

Higher National Examination-based Graded unit Specification: Designing the examination and assessing learners (cont)

These topics are taken from the knowledge and understanding contained within the following component units of this award.

1   H173 34   *Developing Software: Introduction*
2   H182 34   *Systems Development: User Centred Design*
3   F1 VV 34   *User Interface Design*
4   HF3F 34   *Digital Graphics Fundamentals*
5   HF3K 34   *Web Technologies 1: HTML and CSS*

The topics may be assessed using constructed response questions or a combination of constructed response and selected response questions. It is permissible (but not required) to offer learners a **limited** choice within the question paper.

At least 30% of the available marks must be awarded for questions that assess knowledge between topics.

Learners' responses must be assessed using a pre-prepared marking scheme. The marking scheme will be based on the above distribution of marks together with the Grade Related Criteria. A specific question paper may slightly alter the allocation of marks specified in the above table, while adhering to the general distribution. Half marks should not be awarded for any question.

Conditions of assessment

The assessment is based on a written examination lasting **three hours**. The examination is closed-book.

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 Examination-based Graded Units, assessors may provide advice and guidance on examination technique and clarification on the meaning of command words which may appear within an examination paper, prior to the formal examination.

Remediation is not allowed in Examination-based Graded Unit assessments.

Any learner who has failed their Higher National Examination-based Graded Unit or wishes to upgrade their award must be given a re-assessment opportunity, or in exceptional circumstances, two re-assessment opportunities. This must be done by using a substantially different examination.

The examination should be unseen and the assessment should be conducted in controlled and invigilated conditions. At all times, the security, integrity and confidentiality of the examination must be ensured.

No reference material should be allowed into the examination room. The examination should take place under closed-book conditions. Calculators are not permitted.

Higher National Examination-based Graded unit Specification: Designing the examination and assessing learners (cont)

All examination question papers, scripts and rough working must be returned to the invigilator at the end of the examination. Where published SQA exemplars are used, these must be returned to, and retained by, the centre.

The examination should normally be sat in one sitting. However, it is permissible to alter this where local circumstances require alternative arrangements (perhaps to accommodate e-assessment).

Assessing and grading learners

Learners who meet the minimum Evidence Requirements will have their achievement graded as an A, B or C. The Grade Related Criteria to be used to judge learner performance for this Graded unit is specified in the following table.

Grade Related Criteria	
Grade A	**Grade C**
Is a seamless, coherent piece of work or exam script which consistently:	Is a co-ordinated piece of work or exam script which:
♦ provides responses that are **legible**, **well-structured** and **coherently expressed**, demonstrating **consistent** use of correct terminology	♦ provides responses that are **legible**, **adequately structured** and **reasonably expressed**, demonstrating **mostly consistent** use of correct terminology
♦ demonstrates **deep** understanding of a body of knowledge, sampled by this question paper	♦ demonstrates **adequate** understanding of a body of knowledge, sampled by this question paper
♦ demonstrates knowledge and understanding that is **embedded** in the main theories, concepts and principles relating to the topics	♦ demonstrates knowledge and understanding that is **occasionally related** to the main theories, concepts and principles relating to the topics
♦ apply knowledge and understanding to specific scenarios **consistently** and **creatively**	♦ apply knowledge and understanding to specific scenarios **occasionally**
♦ integrates **most** knowledge and concepts within and across topics.	♦ links **some** knowledge within and across **some** topics.

The marks achieved by the learner in the examination should be aggregated to arrive at an overall mark for the examination. 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%

Higher National Examination-based Graded unit Specification: Designing the examination and assessing learners (cont)

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 sitting or through any re-assessment.

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

Higher National Examination-based Graded unit Support Notes

Guidance on approaches to delivery and assessment of this Graded unit

The purpose of the Graded unit is to assess the learner's ability to integrate and apply the Knowledge and/or Skills gained across a range of five mandatory units within the HNC Digital Design and Web Development.

Developing Software: Introduction
Digital Graphics Fundamentals
Systems Development: User Centred Design
User Interface Design
Web Technologies 1: HTML and CSS

The design of the examination permits various implementations. These include, but are not limited to:

♦ constructed response questions only (no choice)
♦ constructed response questions only (with choice)
♦ mixture of selected and constructed response questions (no choice)
♦ mixture of selected and constructed response questions (with choice)
♦ combination of the above.

The first implementation may involve 10 extended response questions, each worth 10 marks, and the learner is expected to attempt all 10 questions. The second implementation may involve 12 extended response questions, each worth 10 marks, and the learner is expected to attempt 10 questions. The third implementation may involve a question paper with two sections: Section 1 may comprise 25 MCQ/MRQs (each worth 1 or 2 marks) combining two 40 marks overall; Section 2 may comprise six extended response questions (each worth 10 marks) combining to 60 marks overall. The fourth implementation may involve a question paper similar to the previous implementation with but some choice in Section 2.

The last implementation (a combination of question types and choice) will be developed more fully in the following table:

This table illustrates the distribution of marks across three sections.

Section	Question type	No. of questions	Marks per question	Total marks	Notes
1	MCQ/MRQ	30	1	30	Factual knowledge within component units.
2	Extended response (with choice)	5 (attempt 4)	10	40	Descriptions and explanations based on discrete topics.
3	Extended response (no choice)	3	10	30	Integrative questions involving higher order competencies.

Higher National Examination-based Graded unit Support Notes

Guidance on approaches to delivery and assessment of this Graded unit (cont)

Section 1

This section is designed to assess learners' knowledge of basic facts, procedures and concepts and is assessed through selected response questions. This section should focus on basic knowledge (20 marks) and comprehension (10 marks).This section is well suited to the assessment of learners' knowledge of terminology, appreciation of basic procedures and understanding of fundamental principles.

The questions in this section should be straightforward for the typical (but properly prepared) learner. They should relate to the overt or underpinning knowledge contained within the designated source units.

Sections 2 and 3

These are designed to assess deeper cognitive skills and are assessed through constructed response questions.

Section 2 will comprise five questions, of which learners should attempt four (40 marks). The source of all questions is defined in the mandatory section of this specification. The questions should assess both the overt and underpinning cognitive competencies included in the designated units. The knowledge and comprehension in this section may be more complex than that assessed in Section 1.

In Section 3 learners are required to attempt three extended response questions, which should integrate the cognitive competencies from two or more of the designated topics. Each question should combine the knowledge from two or more units in an original way, posing question(s) that assess the learner's ability to combine his/her knowledge of various parts of this award.

It is suggested that centres arrange for the delivery of the five underpinning units prior to the delivery of this unit. A suggested approach would be to revise the knowledge contained within the mandatory units, teach examination and study techniques, and provide practice questions for the learners to attempt under examination conditions.

Sufficient time must be available for re-assessment. The centre should plan to have the first sitting of the examination of the unit completed, marked and internally verified prior to any scheduled central verification event.

Opportunities for developing Core and other essential skills

There are no Core Skills embedded in this Graded unit specification.

History of changes to Graded unit

Version	Description of change	Date
02	Update of Conditions of Assessment	25/07/18

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

General information for learners

Graded unit title: Digital Design and Web Development:
Graded unit 1 (SCQF level 7)

The Graded unit is designed to assess your knowledge and understanding of key facts and concepts relating to digital design and web development.

The unit is graded. The grading is based on your mark for the assessment as follows:

Grade A   70–100%
Grade B   60–69%
Grade C   50–59%.

Your mark will be based on your performance in an **examination**. The exam will last for **three hours** and will be sat under **controlled conditions**. No reference material is permitted during the exam.

The precise nature of the exam is not fixed but it will include a number of questions that require a written response. It may consist of multiple-choice questions and essay-type questions.

The questions will be based on the following topics.

1   Computer programming concepts
2   User-centred design process
3   User interface design
4   Digital graphics
5   HTML and CSS (Hypertext Markup Language and Cascading Style Sheets)

Some of the questions will require you to combine your knowledge of these topics.