



Group Award Specification for:

HNC Digital Design and Web Development

Group Award Code: GL7Y 15

HND Web Development

Group Award Code: GL81 16

HND Digital Design and Development

Group Award Code: GL80 16

Validation date: September 2016

Date of original publication: September 2016

Version: 03, May 2018

Contents

1	Introduction	1
2	Qualification(s) structure	4
2.1	Structure	4
3	Aims of the qualification(s)	13
3.1	General aims of the qualification(s)	13
3.2	Specific aims of the qualification(s)	14
3.3	Graded Unit(s)	15
4	Recommended entry to the qualification(s)	16
4.1	Core Skills entry profile.....	17
5	Additional benefits of the qualification in meeting employer needs.....	18
5.1	Mapping of qualification aims to Units.....	19
5.2	Mapping of National Occupational Standards (NOS) and/or trade body standards	21
5.3	Mapping of Core Skills development opportunities across the qualification(s)	25
5.4	Mapping of Computational Thinking opportunities across the qualification(s)	27
5.5	Assessment Strategy for the qualification(s).....	29
5.6	Vendor Certification	32
6	Guidance on approaches to delivery and assessment.....	34
6.1	Sequencing/integration of Units	35
6.2	Recognition of Prior Learning	38
6.3	Opportunities for e-assessment	44
6.4	Support materials.....	44
6.5	Resource requirements	44
7	General information for centres	45
8	Glossary of terms	45
9	General information for learners	48

1 Introduction

This document was previously known as the Arrangements document. The purpose of this document is to:

- ◆ assist centres to implement, deliver and manage the qualification
- ◆ provide a guide for new staff involved in offering the qualification
- ◆ inform course managers, teaching staff, assessors, learners, employers and HEIs of the aims and purpose of the qualification
- ◆ provide details of the range of learners the qualification is suitable for and progression opportunities

1.1 Background

The Higher National Certificate (HNC) in Digital Design and Web Development replaces the Higher National Certificate in Interactive Media.

The Higher National Diploma (HND) in Web Development and the Higher National Diploma in Digital Design and Development replace the Higher National Diploma in Interactive Media.

A Qualification Design Team (QDT) was formed in October 2014 with the task of reviewing the current HNC and HND Interactive Media as these awards have been running since 2009 and were needing updated. The QDT was made up of members from further education, higher education and industry. After a productive first meeting it was decided that due to the increasing amount of skill requirements and diversity of job opportunities within the digital sector it would be beneficial to have one new HNC titled Digital Design and Web Development that offers broad general knowledge and set of skills relevant to the digital industries sector and two more specialised HND streams – HND Web Development and HND Digital Design and Development.

Although the two HND level courses have some commonality, the skills required to become a web or app developer differ significantly from the skills required to become a digital designer/content developer. Web and app development requires strong front-end and back-end coding skills and therefore the HND in Web Development has a much stronger emphasis on software development with an appreciation of user experience (UX) and user interface (UI) design. Digital design and content development will likely involve some coding skills, particularly in front-end languages, but requires more skills in the design and development of content for web sites, apps and games. This includes working with graphics, motion graphics, video, animation and sound.

1.2 Rationale

Websites and apps have become an important element of marketing and communications for businesses and organisations and they need to change and adapt as technologies develop and businesses grow. Business and organisation expectations continually increase and to remain successful traditional web development companies have also changed and will continually adapt how they operate to satisfy business requirements.

Digital agencies are replacing web design and development companies and their services now include not only web design and development, e-commerce, app design and development, digital marketing and branding but SEO, UX/UI design, graphic design, video production, motion graphics, animation and copywriting to name a few — everything that a business or organisation needs in terms of marketing and communication. Many larger organisations have their own Digital Teams who provide services in-house which could include web, mobile and applications.

These qualifications will allow centres to maintain an up-to-date qualification within the ever changing and volatile employment market. Although the core Units in the award will remain constant the number of optional Units will allow centres to easily adapt the focus on the awards to suit regional opportunities in the employment markets and articulation pathways.

1.3 Target Client Groups

These qualifications will be suitable for a range of learners. The primary target groups for the HNC Digital Design and Web Development award are:

- ◆ School leavers who have gained at least one Higher (SCQF level 6) together with three passes at National 5
- ◆ Further education students who have completed a National Certificate in Computing with Digital Media at SCQF level 5 or level 6 or an equivalent qualification.
- ◆ Unemployed adults who wish to retrain in this vocational field with a view to finding employment
- ◆ Adults in employment who wish to change career
- ◆ Adults wishing to gain a recognised national qualification as part of Continuing Professional Development (CPD) requirements. This could be on a day release or part-time basis

The primary target groups for the HND Web Development year 2 and HND Digital Design and Development year 2 are:

- ◆ Students having gained the HNC Digital Design and Web Development award would be allowed direct entry into either HND Web Development or HND Digital Design and Development year 2

1.4 Employment Opportunities

An aim of the awards is to provide a skill set that matches those required by the digital industries and enhance employability through engagement with National Occupational Standards. IT User Skills Standards, IT Professional Standards and Creative Skillset are relevant to these qualifications.

IT User Skills Standards (National Occupational Standards) are industry standards for skills, developed in collaboration with employers, professional bodies and others. The awards have been developed to make sure that they address specific areas of competence needed by IT users in the digital industries. The areas of relevance for these awards are Digital Content and Digital Applications.

The standards from IT Professional Standards that apply to these qualifications fall under the categories *Architecture, Analysis and Design and Solution Development and Implementation*. Further information can be found here:

<https://www.thetechpartnership.com/standards-and-quality/it-user-skills-standards/>

Creative Skillset is the industry skills body for the Creative Industries. Interactive Media and Computer Games (2013) National Occupational Standards (NOS) are the standards that cover the main areas of competence that are at the heart of interactive media development. They are supported by other areas of competence that are not specific to this discipline but which are nevertheless of vital importance to it. Further information can be found here:

http://standards.creativeskillset.org/assets/0000/0876/Full_Suite_IMCG_Approved_Feb_2013.pdf

A current search on the Scottish job market website s1jobs.com resulted in over 200 jobs advertised that require the skills that these awards are aimed at addressing. Job titles included:

- ◆ Web Developer
- ◆ App Developer
- ◆ Digital Designer
- ◆ Digital Marketing
- ◆ Web Content Editor
- ◆ Digital Content Editor

1.5 Articulation Opportunities

The online survey was sent out to relevant representatives at the following universities. Email communication and face to face meetings also took place with staff at the 5 universities.

- ◆ University of the West of Scotland (UWS)
- ◆ Robert Gordon's University (RGU)
- ◆ Glasgow Caledonian University (GCU)
- ◆ Napier University
- ◆ Abertay University

Each university has different degree programmes that offer articulation routes into year 2 and/or year 3 from the HND's. With this in mind the approach taken, in line with other HN Awards, was to develop a central core of mandatory Units addressing the common competencies identified, with a list of optional Units from which centres can construct a tailored award best suited to their articulation requirements.

The awards have therefore been designed to allow learners to progress to degree level study. Several universities have confirmed that, in principle, learners who achieve the HND Digital Design and Development and HND Web Development will be suitable for direct entry into either year 2 or year 3 of their related courses.

These degree programmes include:

- ◆ BSc (Hons) Digital Media — Design, Production and Development
- ◆ BSc Computer Science
- ◆ BSc/BSc (Hons) Web Design and Development
- ◆ BSc (Hons) Web and Mobile Development
- ◆ BSc (Hons) Creative Computing
- ◆ BSc/BSc (Hons) Digital Media
- ◆ BSc/BSc (Hons) Interactive Media Design
- ◆ BSc (Hons) Computing

There are articulation agreements for some of these courses that stipulate a particular set of options are attained before entry will be allowed. Additional options have been added to the new frameworks to allow as much flexibility as possible. It is normal practice, in this area, for universities to agree formal articulation arrangements at a regional level, with local colleges. The current framework includes sufficient options to permit such local arrangements to be created.

2 Qualification(s) structure

The HNC Digital Design and Web Development Group Award is made up of 12 SQA Unit credits. It comprises 96 SCQF credit points of which 56 are at SCQF level 7 in the mandatory section including a Graded Unit of 8 SCQF credit points at SCQF level 7.

The HND Digital Design and Development and HND Web Development Group Awards are made up of 30 SQA Unit credits. They comprise 240 SCQF credit points of which 64 SCQF credit points are at SCQF level 8 in the mandatory section each including a Graded Unit of 16 SCQF credit points at SCQF level 8.

2.1 Structure

HNC Digital Design and Web Development

In order to achieve the HNC Digital Design and Web Development the learner must achieve 7 mandatory credits and 5 optional credits.

The mandatory section of this award incorporates 56 SCQF credit points at SCQF Level 7 which satisfies the design principles.

Mandatory Units — Total of 7 credits

Learners must achieve all of the following Units.

Unit code	Unit title	SQA credit	SCQF credit points	SCQF level
H173 34	Developing Software: Introduction	1	8	7
HG2V 34	Digital Design and Web Development: Graded Unit 1 (Exam)	1	8	7
HF3F 34	Digital Graphics Fundamentals	1	8	7
H182 34	Systems Development: User Centred Design	1	8	7

H178 34	Team Working in Computing	1	8	7
HF55 34	User Interface Design	1	8	7
HF3K 34	Web Technologies 1: HTML and CSS	1	8	7

Optional Units — Total of 5 credits

Learners must achieve at least 5 credits from the optional Units.

Unit code	Unit title	SQA credit	SCQF credit points	SCQF level
F209 34	2D Animation	2	16	7
F5GC 34	3D Computer Modelling and Animation: An Introduction	2	8	7
F6JJ 34	Building an e-Business	1	8	7
HF4X 34	Client Side Scripting for Web Applications	2	8	7
H4JN 34	Compositing and Motion Graphics	1	8	7
H17A 34	Computer Networking: Fundamentals	1	8	7
H17D 34	Computing: Introduction to Project Management	1	8	7
H17E 34	Computing: PC Hardware and Operating Systems Essentials	1	8	7
DV6E 34	Database Design Fundamentals	1	8	7
H17H 34	Databases: Introduction	1	8	7
HF4Y 34	Developing Mobile Web Based Applications: An Introduction	2	16	7
HG1N 34	Digital Marketing: Fundamentals	1	8	7
HF50 34	Digital Media: Audio	1	8	7
HF86 34	Digital Media: Bitmap Techniques	1	8	7
HF87 34	Digital Media: Vector Techniques	1	8	7
HF51 34	Digital Media: Video	1	8	7
HF85 34	Emerging Technologies and Experiences	1	8	7
HH3G 34*	Games Design: Pitch a Treatment	1	8	7
F8R6 34*	Game Design Theory	1	8	7
F8R5 34*	Games Development: Character Creation and Storytelling	1	8	7
DV62 34	Graphic Design	2	16	7
F1VY 34	Manage Database Systems Using SQL	1	8	7
H17P 34	Managing a Web Server	1	8	7
F6BX 35*	Narrative and Genre in Computer Games	2	16	8
DE3R 34	Personal Development Planning	1	8	7
HF3G 34	Physical Computing Fundamentals	1	8	7
H17W 34	Software Development: Developing Small Scale Standalone Applications	2	16	7
H17X 34	Software Development: Programming Foundations	1	8	7
DH3J 34	SQL: Introduction	1	8	7
HF3H 34	Web Development: Content Management Systems (CMS)	2	16	7
HF58 34	Web Development: Essential Content	2	16	7
HF56 35	Web Development: Producing a Data Driven Website	1	8	8
HF3J 35	Web Development: Tools and Technologies	2	16	8
F6C5 35	Web Development: Website Optimisation	1	8	8

DG6E 34	Work Role Effectiveness	3	24	7
DG6G 35	Work Role Effectiveness	3	24	8
H185 35	Working in IT	2	16	8

*Refer to History of Changes for revision changes.

HND Web Development

In order to achieve the HND Web Development Group Award the learner must achieve 15 mandatory credits and 15 optional credits.

The mandatory section of this award incorporates 64 SCQF credit points at SCQF Level 8 which satisfies the design principles.

Mandatory Units — Total of 15 credits

Learners must achieve all of the following Units.

Unit code	Unit title	SQA credit	SCQF credit points	SCQF level
HF3D 35	Designing and Developing an Interactive Product	2	16	8
H173 34	Developing Software: Introduction	1	8	7
HG2V 34	Digital Design and Web Development Graded Unit 1 (Exam)	1	8	7
HF3F 34	Digital Graphics Fundamentals	1	8	7
HF52 35	Human Computer Interface	1	8	8
H182 34	Systems Development: User Centred Design	1	8	7
H178 34	Team Working in Computing	1	8	7
HF55 34	User Interface Design	1	8	7
HF57 35	Web Development: Dynamically Generated Content	2	16	8
HG3H 35	Web Development: Graded Unit 2 (Project)	2	16	8
HF3K 34	Web Technologies 1: HTML and CSS	1	8	7
HF3M 35	Web Technologies 2: HTML, CSS and JavaScript	1	8	8

Optional Units — Total of 15 credits

Learners must achieve at least 15 credits from the optional Units.

Unit code	Unit title	SQA credit	SCQF credit points	SCQF level
F209 34	2D Animation	2	16	7
F5GC 34	3D Computer Modelling and Animation: An Introduction	2	8	7
F6JJ 34	Building an e-Business	1	8	7
HF4X 34	Client Side Scripting for Web Applications	2	8	7
H4JN 34	Compositing and Motion Graphics	1	8	7
H17A 34	Computer Networking: Fundamentals	1	8	7
H17D 34	Computing: Introduction to Project Management	1	8	7

H17E 34	Computing: PC Hardware and Operating Systems Essentials	1	8	7
DV6E 34	Database Design Fundamentals	1	8	7
H17H 34	Databases: Introduction	1	8	7
HF4Y 34	Developing Mobile Web Based Applications: An Introduction	2	16	7
Unit code	Unit title	SQA credit	SCQF credit points	SCQF level
F6BN 35	Developing Rich Internet Applications	2	16	8
HG1N 34	Digital Marketing: Fundamentals	1	8	7
HF50 34	Digital Media: Audio	1	8	7
HF86 34	Digital Media: Bitmap Techniques	1	8	7
HF87 34	Digital Media: Vector Techniques	1	8	7
HF51 34	Digital Media: Video	1	8	7
HF83 35	e-Commerce solutions	1	8	8
HF85 34	Emerging Technologies and Experiences	1	8	7
DR0T 35	Entrepreneurship in Creative Industries	1	8	8
DV62 34	Graphic Design	2	16	7
HF53 35	Interactive Media Composition	1	8	8
F1VY 34	Manage Database Systems Using SQL	1	8	7
H17P 34	Managing a Web Server	1	8	7
A5P0 35 D76F 35	Mathematics for Computing or Mathematics for Computing 2	1	8	8
DE3R 34	Personal Development Planning	1	8	7
HF3G 34	Physical Computing Fundamentals	1	8	7
HF84 35	Physical Computing Practice and Development	1	8	8
HF54 35	Professional and Legal Issues for Interactive Media Developers	1	8	8
H16W 35	Relational Database Management Systems	2	8	8
FM97 35	Self-Describing Data (XML)	1	8	8
H16Y 35	Software Development: Data Structures	2	16	8
H17W 34	Software Development: Developing Small Scale Standalone Applications	2	16	7
H1J9 35	Software Development: Developing Websites for Multiplatform Use	2	16	8
H172 35	Software Development: Object Oriented Analysis and Design	2	16	8
H171 35	Software Development: Object Oriented Programming	2	16	8
H17X 34	Software Development: Programming Foundations	1	8	7
DH3J 34	SQL: Introduction	1	8	7
H3LM 35	Team Development	1	8	8
HF3H 34	Web Development: Content Management Systems (CMS)	2	16	7
HF58 34	Web Development: Essential Content	2	16	7
HF56 35	Web Development: Producing a Data Driven Website	1	8	8
HF3J 35	Web Development: Tools and Technologies	2	16	8
F6C5 35	Web Development: Website Optimisation	1	8	8
DG6E 34	Work Role Effectiveness	3	24	7
DG6G 35	Work Role Effectiveness	3	24	8

H185 35	Working in IT	2	16	8
---------	---------------	---	----	---

HND Digital Design and Development

In order to achieve the HND Digital Design and Development Group Award the learner must achieve 15 mandatory credits and 15 optional credits.

The mandatory section of this award incorporates 64 SCQF credit points at SCQF Level 8 which satisfies the design principles.

Mandatory Units — Total of 15 credits

Learners must achieve all the following Units.

Unit code	Unit title	SQA credit	SCQF credit points	SCQF level
HF3D 35	Designing and Developing an Interactive Product	2	16	8
HF3E 35	Developing Digital Media for an Interactive Product	2	16	8
H173 34	Developing Software: Introduction	1	8	7
HG2V 34	Digital Design and Web Development: Graded Unit 1 (Exam)	1	8	7
HG3F 35	Digital Design and Development: Graded Unit 2 (Project)	2	16	8
HF3F 34	Digital Graphics Fundamentals	1	8	7
HF52 35	Human Computer Interface	1	8	8
HF53 35	Interactive Media Composition	1	8	8
H182 34	Systems Development: User Centred Design	1	8	7
H178 34	Team Working in Computing	1	8	7
HF55 34	User Interface Design	1	8	7
HF3K 34	Web Technologies 1: HTML and CSS	1	8	7

Optional Units — Total of 15 credits

Learners must achieve at least 15 credits from the optional Units.

Unit code	Unit title	SQA credit	SCQF credit points	SCQF level
F209 34	2D Animation	2	16	7
DE35 35	2D Digital Imaging and Animation	2	16	8
F5GC 34	3D Computer Modelling and Animation: An Introduction	2	8	7
F869 34	3D Level Editing	1	8	7
DE2N 35	3D Modelling and Animation	2	16	8
F6JJ 34	Building an e-Business	1	8	7
HF4X 34	Client Side Scripting for Web Applications	2	8	7

H4JN 34	Compositing and Motion Graphics	1	8	7
H17A 34	Computer Networking: Fundamentals	1	8	7
H17D 34	Computing: Introduction to Project Management	1	8	7
H17E 34	Computing: PC Hardware and Operating Systems Essentials	1	8	7
F8R5 34*	Games Development: Character Creation and Storytelling	1	8	7

Unit code	Unit title	SQA credit	SCQF credit points	SCQF level
DV6E 34	Database Design Fundamentals	1	8	7
H17H 34	Databases: Introduction	1	8	7
HF4Y 34	Developing Mobile Web Based Applications: An Introduction	2	16	7
F6BN 35	Developing Rich Internet Applications	2	16	8
F6BS 35	Digital Imaging: Advanced Bitmap Techniques	2	16	8
F6BT 35	Digital Imaging: Advanced Vector Techniques	2	16	8
HG1N 34	Digital Marketing: Fundamentals	1	8	7
HF50 34	Digital Media: Audio	1	8	7
HF86 34	Digital Media: Bitmap Techniques	1	8	7
HF87 34	Digital Media: Vector Techniques	1	8	7
HF51 34	Digital Media: Video	1	8	7
HF85 34	Emerging Technologies and Experiences	1	8	7
DR0T 35	Entrepreneurship in Creative Industries	1	8	8
HH3E 35*	Game Customisation and Scripting	2	16	8
F1GW 35	Game Design	2	16	8
F8R6 34*	Game Design Theory	1	8	7
HH3G 34*	Games Design: Pitch a Treatment	1	8	7
DV62 34	Graphic Design	2	16	7
F1VY 34	Manage Database Systems Using SQL	1	8	7
H17P 34	Managing a Web Server	1	8	7
F6BX 35*	Narrative and Genre in Computer Games	2	16	8
DE3R 34	Personal Development Planning	1	8	7
HF3G 34	Physical Computing Fundamentals	1	8	7
HF84 35	Physical Computing Practice and Development	1	8	8
HF54 35	Professional and Legal Issues for Interactive Media Developers	1	8	8
H17W 34	Software Development: Developing Small Scale Standalone Applications	2	16	7
H1J9 35	Software Development: Developing Websites for Multiplatform Use	2	16	8
H17X 34	Software Development: Programming Foundations	1	8	7
DH3J 34	SQL: Introduction	1	8	7
H3LM 35	Team Development	1	8	8
HF3H 34	Web Development: Content Management Systems (CMS)	2	16	7
HF57 35	Web Development: Dynamically Generated Content	2	16	8
HF58 34	Web Development: Essential Content	2	16	7

HF56 35	Web Development: Producing a Data Driven Website	1	8	8
HF3J 35	Web Development: Tools and Technologies	2	16	8
F6C5 35	Web Development: Website Optimisation	1	8	8
HF3M 35	Web Technologies 2: HTML, CSS and JavaScript	1	8	8
DG6E 34	Work Role Effectiveness	3	24	7
DG6G 35	Work Role Effectiveness	3	24	8
H185 35	Working in IT	2	16	8

*Refer to History of Changes for revision changes.

Building Units

The mandatory Units of the awards reflect their aims and purposes and are the main building Units of the awards. The following table illustrates how each mandatory Unit relates to and is a building block of other Units within the awards.

HF55 34 User Interface Design This Unit is designed to introduce learners to the concepts of colour theory, font usage, graphic design principles and graphic design elements which will enable them to use these to ensure usability in the design of user interfaces for digital media like web, apps, games and animation. This Unit is a building block for the following Units:	
DV62 34	Graphic Design
HF3H 34	Web Development: Content Management Systems (CMS)
HF58 34	Web Development: Essential Content
HF4Y 34	Developing Mobile Web Based Applications: An Introduction
F6C5 35	Web Development: Website Optimisation
HF52 35	Human Computer Interface
HF3D 35	Designing and Developing an Interactive Product
HF53 35	Interactive Media Composition
HF3K 34 Web Technologies 1: HTML and CSS This Unit will introduce learners to current web technologies and develop practical skills in HTML and CSS. This Unit is a building block for the following Units:	
HF3H 34	Web Development: Content Management Systems (CMS)
HF58 34	Web Development: Essential Content
HF3J 35	Web Development: Tools and Technologies
HF57 35	Web Development: Producing a Data Driven Website
F6C5 35	Web Development: Website Optimisation
HF4Y 34	Developing Mobile Web Based Applications: An Introduction
HF4X 34	Client Side Scripting for Web Applications
HF3M 35	Web Technologies 2: HTML, CSS and JavaScript
HF57 35	Web Development: Dynamically Generated Content
HF3D 35	Designing and Developing an Interactive Product
H1J9 35	Software Development: Developing Websites for Multiplatform Use
F6BN 35	Developing Rich Internet Applications
H182 34 Systems Development: User Centred Design This Unit introduces learners to the iterative nature of the user centred design process and how this can help ensure that a development meets the needs of the intended users. A user-centred design approach is fundamental in the development of any successful web, app or game. This Unit is a building block for the following Units:	
HF3H 34	Web Development: Content Management Systems (CMS)
HF58 34	Web Development: Essential Content
HF56 35	Web Development: Producing a Data Driven Website
F6C5 35	Web Development: Website Optimisation
HF4Y 34	Developing Mobile Web Based Applications: An Introduction
HF52 35	Human Computer Interface
HF3D 35	Designing and Developing an Interactive Product

HF3F 34 Digital Graphics Fundamentals	
This Unit introduces learners to the production of images and graphics for use within a variety of digital applications including websites, apps, games and animation. It covers the importance of optimisation, compression and file types. This Unit is a building block for the following Units:	
HF86 34	Digital Media: Bitmap Techniques
HF87 34	Digital Media: Vector Techniques
F5GC 34	3D Computer Modelling and Animation: An Introduction 2D Animation
DV62 34	Graphic Design
H4JN 34	Compositing and Motion Graphics
HF3E 35	Developing Digital Media for an Interactive Product
H173 34 Developing Software: Introduction	
This Unit will develop learner's basic software development skills. It includes the design and implementation programming constructs and testing. Programming skills are central to web, app and games development. This Unit is a building block for the following Units:	
HF3J 35	Web Development: Tools and Technologies
HF4Y 34	Developing Mobile Web Based Applications: An Introduction
HF4X 34	Client Side Scripting for Web Applications
H17X 34	Software Development: Programming Foundations
H17W 34	Software Development: Developing Small Scale Standalone Applications
HF3M 35	Web Technologies 2: HTML, CSS and JavaScript
HF57 35	Web Development: Dynamically Generated Content
HF3D 35	Designing and Developing an Interactive Product
H1J9 35	Software Development: Developing Websites for Multiplatform Use
F6BN 35	Developing Rich Internet Applications
H178 34 Team Working in Computing	
This Unit will develop effective skills for team working in the context of computing. Learners will develop co-operative working skills which will include negotiation of goals, roles and responsibilities in the development of a team based Information and Communication Technology (ICT) project. Being able to work in a team is a vital skill for the work place. This Unit is a building block for the following Units:	
H17D 34	Computing: Introduction to Project Management
H3LM 35	Team Development
HF3M 35 Web Technologies 2: HTML, CSS and JavaScript	
This Unit will further develop learners in a variety of current web technologies to enable them to create accessible, interactive, and responsive websites. This will involve researching and implementing techniques to make web content dynamic and responsive and includes the use of editors, libraries and Application Programming Interfaces (APIs) for development. These skills are essential in a web developer. This Unit is a building block for the following Units:	
HF3J 35	Web Development: Tools and Technologies
HF3D 35	Designing and Developing an Interactive Product
H1J9 35	Software Development: Developing Websites for Multiplatform Use
F6BN 35	Developing Rich Internet Applications
HG3H 35	Web Development: Graded Unit 2
HF57 35 Web Development: Dynamically Generated Content	
This Unit will develop knowledge and practical skills in a server side scripting language and database using SQL to enable the development of data driven web site. This Unit is a building block for the following Units:	
H1J9 35	Software Development: Developing Websites for Multiplatform Use
F6BN 35	Developing Rich Internet Applications
HG3H 35	Web Development: Graded Unit 2

HF52 35 Human Computer Interface	
This Unit will provide learners with an understanding and appreciation of the importance of the user experience (UX) so that they will be able to create interfaces that are receptive to user needs. It will develop competence in developing successful websites, apps or games by understanding the requirements of a good user experience and designing interfaces receptive to user needs. This Unit is a building block for the following Units:	
HG3F 35	Digital Design and Development: Graded Unit 2
HG3H 35	Web Development: Graded Unit 2
HF3D 35 Designing and Developing an Interactive Product	
This Unit will allow learners to gain a higher level of technical expertise using their chosen development tools and a deeper understanding of the development process for an interactive product.	
HG3F 35	Digital Design and Development: Graded Unit 2
HG3H 35	Web Development: Graded Unit 2
HF3E 35 Developing Digital Media for an Interactive Product	
This Unit will introduce learners to the issues surrounding the development of media content for the inclusion within interactive products such as websites, apps or computer games. It covers technical and legislative aspects surrounding the creation and sourcing of a number of different media types including bitmap and vector images, video, audio and animated content. It will allow learners to gain a higher level of expertise in the creation of selected media types. This Unit is a building block for the following Units:	
HG3F 35	Digital Design and Development: Graded Unit 2
HF53 35 Interactive Media Composition	
This Unit will develop advanced competence in the creative and aesthetic elements of interactive digital media including the use and application of design principles, composition, colour, typography, digital images and effects. This Unit is a building block for the following Units:	
HF3E 35	Developing Digital Media for an Interactive Product
HF3D 35	Designing and Developing an Interactive Product
HG3F 35	Digital Design and Development: Graded Unit 2

3 Aims of the qualification(s)

The principal aim is to offer contemporary and flexible qualifications at SCQF levels 7 and 8 that embrace the dynamic nature of all aspects involved in the design and development of websites, web and mobile apps and creative digital content with a focus on interface design, user experience and communication.

3.1 General aims of the qualification(s)

The general aims of the awards are:

- 1 To develop learners' knowledge and skills in planning, analysis, design, developing, testing and evaluation of digital products.
- 2 To develop strategies for learning and encourage transferable skills including Core Skills
- 3 To enhance employment prospects, particularly relating to the Web/App, Design/Development and Digital Media/Marketing industries, through engagement with National Occupational Standards.
- 4 To enable progression within the Scottish Credit and Qualifications Framework (SCQF).
- 5 To develop study and research skills.
- 6 To support learners' continuing professional development.
- 7 To provide academic motivation and challenge, and promote an enjoyment of the subject.

- 8 To encourage learners to keep up to date with current and emerging standards and technologies using on-line and other resources.

3.2 Specific aims of the qualification(s)

The specific aims of the HNC Digital Design and Web Development are:

- 9 To prepare learners for progression to further study in web development and digital design and development.
- 10 To prepare learners for employment in various junior roles within the digital industries.
- 11 To develop a range of specialist knowledge and skills in front end web development which includes coding.
- 12 To develop a range of specialist knowledge and skills in the design and creation of digital content.
- 13 To develop knowledge and understanding of the user centred design approach to facilitate effective user interfaces (UI).
- 14 To develop knowledge and understanding of relevant professional issues relating to the digital design and web development which includes usability, accessibility, validity, quality, optimisation, current content, copyright, intellectual property and testing.

The specific aims of the HND Web Development are:

- 15 To prepare learners for progression to further study in web development, app development and interactive media.
- 16 To prepare learners for employment in varying roles at varying levels in the digital and web industries.
- 17 To develop a range of specialist knowledge and skills in front end and back end web development which includes complex coding.
- 18 To develop a range of specialist knowledge and skills in web and app development.
- 19 To develop deeper knowledge and understanding of the user centred design approach to facilitate effective user interfaces(UI) and user experiences(UX).
- 20 To develop deeper knowledge and understanding of relevant professional issues relating to the web/app design/development and digital media/marketing industries which includes usability, accessibility, validity, quality, optimisation, current content, copyright, intellectual property and rigorous testing.
- 21 To promote collaborative and individual projects/ventures.

The specific aims of the HND Digital Design and Development are:

- 22 To prepare learners for progression to further study in digital design, digital development, and interactive media.
- 23 To prepare learners for employment in varying roles at varying levels in the digital and web industries.
- 24 To develop a range of specialist knowledge and skills in interactive product development which includes complex coding.
- 25 To develop a range of specialist knowledge and skills in the design and creation of digital content.
- 26 To develop deeper knowledge and understanding of the user centred design approach to facilitate effective user interfaces(UI) and user experiences(UX).

- 27 To develop deeper knowledge and understanding of relevant professional issues relating to the web/app design/development and digital media/marketing industries which includes usability, accessibility, validity, quality, optimisation, current content, copyright, intellectual property and rigorous testing.
- 28 To promote collaborative and individual projects/ventures.

3.3 Graded Unit(s)

HNC Digital Design and Web Development Graded Unit 1

For the HNC Digital Design and Web Development, the QDT selected an examination as the Graded Unit. An examination, rather than a project, was chosen for several reasons, including:

- ◆ Continuity: HNC Interactive Media has always used an examination
- ◆ QDT preference: The QDT supported the use of an examination.
- ◆ 75% of the respondents in the survey carried out, supported the choice of HNC Graded Unit Examination
- ◆ HE articulation: an examination facilitates progression to degree courses, and was supported by HE in our consultations.

The Graded Unit for this award is designed to provide evidence that the learner has achieved the following principal aims of HNC Digital Design and Web Development:

- ◆ To develop learners' knowledge and skills in planning, analysis, design, developing, testing and evaluation.
- ◆ To develop study and research skills
- ◆ To prepare students for progression to further study in Web Development, Mobile App Development, Web and Digital Content/Interactive Media Design

Format of the Graded Unit 1 examination

The Graded Unit 1 examination will contain 3 sections:

- ◆ Section 1 (Selected response questions) — will focus on lower level cognitive abilities relating to knowledge retention and comprehension of essential facts and concepts. It will contribute 30 marks (30% of the overall total)
- ◆ Section 2 (Constructed response questions) — will focus on higher level abilities relating to more demanding cognitive competencies. This will comprise of two questions which will integrate the cognitive competencies from two or more of the designated source Units. The marks for it will contribute 20 marks (20% of the overall total)
- ◆ Section 3 (Constructed response questions) — will focus on higher level abilities relating to more demanding cognitive competencies. The learner will select any 5 questions from 6 and it will contribute 50 marks (50% of the overall total)

HND Digital Design and Development Graded Unit 2 and HND Web Development Graded Unit 2

For both the HND Digital Design and Development and HND Web Development a project was selected as the Graded Unit by the QDT.

This was chosen for several reasons, including:

- ◆ Continuity: HND Interactive Media has used a project
- ◆ QDT Preference: The QDT supported the use of project for both HND Web Development and HND Digital Design and Development.
- ◆ 91% of the respondents in the survey carried out, supported the choice of HND Web Development Graded Unit Project
- ◆ 93% of the respondents in the survey carried out, supported the choice of HND Digital Design and Development Graded Unit Project
- ◆ HE Articulation: a project facilitates progression to degree courses as it supports both scholarly activities and independent learning. It was also supported by HE in our consultations.
- ◆ A project can give the learner the opportunity to gain experience in projects that either simulate real-life scenarios or gain experience in working with real clients

The Graded Units for the awards are designed to provide evidence that the learner has achieved the following aims of HND Web Development and HND Digital Design and Development:

- ◆ To develop learners' knowledge and skills in planning, analysis, design, developing, testing and evaluation.
- ◆ To develop study and research skills
- ◆ To encourage learners to keep up to date with current and emerging standards and technologies using on-line and other resources
- ◆ To prepare students for progression to further study in web development, mobile app development, web and digital content/interactive media design
- ◆ To prepare learners for employment in varying roles at varying levels in the web/app design/development and digital media/marketing industries

The SCQF level 8 Graded Units are designed to evidence learners' ability to plan, develop, implement and evaluate technical skills gained throughout their course.

It does not ask the learners to prove new skills but these would be developed as the learner would be expected to carry out independent scholarly activities such as further development of a taught programming language, development of new skills and research capabilities.

4 Recommended entry to the qualification(s)

Entry to this qualification is at the discretion of the centre. The following information on prior knowledge, skills, experience or qualifications that provide suitable preparation for this qualification has been provided by the Qualification Design Team as guidance only. Learners would benefit from having attained the skills, knowledge and understanding required by one or more of the following or equivalent qualifications and/or experience:

HNC Digital Design and Web Development

Formal qualifications

- ◆ National Certificate in Computing with Digital Media at SCQF level 5 or level 6 or a combination of both.
- ◆ Any one relevant Higher (SCQF level 6) together with three National 5 courses
- ◆ An SVQ at level 2 or 3 in Information Technology or other relevant area.

- ◆ Relevant National Progression Awards or National Units at appropriate levels combined with any of the above.
- ◆ A combination of level 6 and level 5 National Units would also be appropriate. For example, a college entrant may possess a National Certificate in Mobile Technology at SCQF level 5 together with individual Unit passes at SCQF level 6.
- ◆ Given the range of vocational awards available to learners, applicants who possess a range of smaller vocational qualifications should also be considered.
- ◆ Applicants with a mixture of the above should also be considered for entry. For example, a learner who possessed a pass in Computer Science at SCQF level 6 (Higher) together with one or more relevant NPA awards at SCQF levels 5 or 6 would, most likely, have the necessary knowledge and skills to benefit from undertaking this award.
- ◆ Equivalent qualifications from other awarding bodies may also be acceptable as would suitable vendor certifications.

Work experience

Mature learners with suitable work experience may be accepted for entry provided the enrolling centre believes that the learner is likely to benefit from undertaking the award.

It would be advisable for all learners to have some prior knowledge of computing or information technology although formal qualifications may not be necessary if suitable experience had been gained informally or through work experience. Such work experience may provide inferred or actual evidence of a learner's skills and knowledge as they apply either to particular HN Units or to the required Core Skills which are listed in the next section.

HND Web Development year 2 HND Digital Design and Development year 2

For direct entry into Year 2 of either HND learners should have successfully passed the HNC Digital Design and Web Development. While success at the HNC Digital Design and Web Development necessitates passing only 12 credits including the mandatory Units, it's recommended that learners achieve 15 credits before moving onto Year 2 of the HND. The selection of the three additional credits should be done at a local level.

4.1 Core Skills entry profile

The Core Skill entry profile provides a summary of the associated assessment activities that exemplify why a particular level has been recommended for this qualification. The information should be used to identify if additional learning support needs to be put in place for learners whose Core Skills profile is below the recommended entry level or whether learners should be encouraged to do an alternative level or learning programme. A detailed outline of the Core Skills development opportunities is provided in section 5.3.

Core Skill	Recommended SCQF entry profile	Associated assessment activities
Communication	5	Report and evaluation writing Requirements and design documentation
Numeracy	5	Logical operators and basic mathematical operation in programming
Information and Communication Technology (ICT)	5	Use of technology to research and present Use of a wide variety of software tools for creating, designing and developing
Problem Solving	5	Analysis, coding and testing
Working with Others	5	Participation in the planning and organising of a co-operative ICT project

5 Additional benefits of the qualification in meeting employer needs

This qualification was designed to meet a specific purpose and what follows are details on how that purpose has been met through mapping of the Units to the aims of the qualification. Through meeting the aims, additional value has been achieved by linking the Unit standards with those defined in National Occupational Standards and/or trade/professional body requirements. In addition, significant opportunities exist for learners to develop the more generic skill, known as Core Skills through doing this qualification.

5.1 Mapping of qualification aims to Units

To ensure that the aims of the qualifications are met, the QDT have ensured that all specific aims are covered by the core Units defined in the awards. Optional Units will however play pivotal roles in the extending the learner's depth of understanding with reference to specific aims.

Code	Unit title	Aims															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
HF55 34	User Interface Design	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓
H178 34	Team Working in Computing		✓	✓	✓	✓	✓	✓	✓	✓	✓					✓	✓
HF3K 34	Web Technologies 1: HTML and CSS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓
H182 34	Systems Development: User Centred Design	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓		✓	✓	✓
HF3F 34	Digital Graphics Fundamentals		✓	✓	✓	✓	✓	✓	✓	✓	✓			✓		✓	✓
H173 34	Developing Software: Introduction		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				✓	✓
HG2V 34	Digital Design and Web Development Graded Unit 1		✓	✓	✓	✓	✓	✓		✓	✓					✓	✓
HF3M 35	Web Technologies 2: HTML, CSS and JavaScript	✓	✓	✓	✓	✓	✓	✓	✓							✓	✓
HF57 35	Web Development: Dynamically Generated Content	✓	✓	✓	✓	✓	✓	✓	✓							✓	✓
HF52 35	Human Computer Interface	✓	✓	✓	✓	✓	✓	✓	✓							✓	✓
HF3D 35	Designing and Developing an Interactive Product	✓	✓	✓	✓	✓	✓	✓	✓							✓	✓
HG3H 35	Web Development Graded Unit 2	✓	✓	✓	✓	✓	✓	✓	✓							✓	✓
HF3E 35	Developing Digital Media for an Interactive Product	✓	✓	✓	✓	✓	✓	✓	✓							✓	✓
HF53 35	Interactive Media Composition	✓	✓	✓	✓	✓	✓	✓	✓								
HG3F 35	Digital Design and Development Graded Unit 2	✓	✓	✓	✓	✓	✓	✓	✓								

Code	Unit title	Aims											
		17	18	19	20	21	22	23	24	25	26	27	28
HF55 34	User Interface Design		✓	✓	✓		✓	✓		✓	✓		
H178 34	Team Working in Computing					✓	✓	✓					✓
HF3K 34	Web Technologies 1: HTML and CSS	✓	✓		✓		✓	✓	✓			✓	
H182 34	Systems Development: User Centred Design		✓	✓	✓		✓	✓		✓	✓	✓	
HF3F 34	Digital Graphics Fundamentals		✓		✓		✓	✓		✓		✓	
H173 34	Developing Software: Introduction	✓	✓		✓		✓	✓	✓			✓	
HG2V 34	Digital Design and Web Development Graded Unit 1						✓	✓					
HF3M 35	Web Technologies 2: HTML, CSS and JavaScript	✓	✓		✓								
HF57 35	Web Development: Dynamically Generated Content	✓	✓		✓	✓							
HF52 35	Human Computer Interface		✓	✓	✓		✓	✓		✓	✓	✓	
HF3D 35	Designing and Developing an Interactive Product	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
HG3H 35	Web Development: Graded Unit 2	✓	✓	✓	✓	✓							
HF3E 35	Developing Digital Media for an Interactive Product						✓	✓	✓	✓		✓	✓
HF53 35	Interactive Media Composition						✓	✓		✓		✓	
HG3F 35	Digital Design and Development: Graded Unit 2						✓	✓	✓	✓	✓	✓	✓

5.2 Mapping of National Occupational Standards (NOS) and/or trade body standards

There are three sources of relevant National Occupational Standards for the HNC Digital Design and Web Development, HND Digital Design and Development and HND Web Development.

These are:

1 IT User Skills Standards published by Tech Partnership

<https://www.thetechpartnership.com/standards-and-quality/>

The standards from IT User Skills that apply to these qualifications fall under the category

Digital Applications

- ◆ ESKITU060 Use IT applications to improve productivity
- ◆ ESKITU061 Select and use a range of IT applications to develop quality solutions
- ◆ ESKITU062 Review and improve productivity using digital applications
- ◆ ESKITU063 Develop business productivity IT applications

Digital Content

- ◆ ESKITU070 Create and edit digital content
- ◆ ESKITU071 Capture and manipulate multimedia content
- ◆ ESKITU072 Design and develop interactive websites and multimedia content

2 IT Professional Standards published by Tech Partnership

The standards from IT Professional Standards that apply to these qualifications fall under the categories:

Architecture, Analysis and Design

- ◆ ESKITP4032 Human Needs Analysis Level 2 Role
- ◆ ESKITP4033 Human Needs Analysis Level 3 Role
- ◆ ESKITP4062 Human Computer Interaction/Interface (HCI) Design Level 2 Role
- ◆ ESKITP4063 Human Computer Interaction/Interface (HCI) Design Level 3 Role

Solution Development and Implementation

- ◆ ESKITP5022v2 Perform software development activities under direction
- ◆ TECIT50831 Implement user centred development infrastructure processes

3 Interactive Media and Computer Games (2013) NOS published by Creative Skillset

The standards cover the main areas of competence that are at the heart of interactive media development. They are supported by other areas of competence that are not specific to this discipline but which are nevertheless of vital importance to it.

http://standards.creativeskillset.org/assets/0000/0876/Full_Suite_IMCG_Approved_Feb_2013.pdf

IM1 Work Effectively in Interactive Media and Computer Games
IM5 Design Interactive Media Products
IM7 Design User Interfaces for Interactive Media Products
IM8 Determine the Implementation of Designs for Interactive Media Products
IM9 Plan Content for Interactive Media Products
IM11 Obtain Assets for use in Interactive Media Products
IM12 Prepare Assets for use in Interactive Media Products
IM14 Create Animated Assets for Interactive Media Products
IM15 Create Art for Electronic Games
IM16 Create Sound Effects for Interactive Media Products
IM18 Use Authoring Tools to Create Interactive Media Products
IM19 Use Mark-Up in Interactive Media Products
IM20 Optimise Web Pages for Search Engines
IM21 Use Style Sheets in Interactive Media Products
IM22 Use Scripting Languages in Interactive Media Products
IM24 Devise and Evaluate User Testing Of Interactive Media Products
IM25 Conduct User Testing Of Interactive Media Products

The following table summarises the relevant standards that have influenced the design of the HNC Digital Design and Web Development, HND Digital Design and Development and HND Web Development.

Code	Unit Title	National Occupational Standards																						
		IM1	IM5	IM7	IM8	IM9	IM11	IM12	IM14	IM15	IM16	IM18	IM19	IM20	IM21	IM22	IM24	IM25	ESKITU060 — 63	ESKITU070 — 72	ESKITP4032 — 33	ESKITP4062 — 63	ESKITP5022	TECIT50831
HF55 34	User Interface Design	✓	✓	✓																✓	✓			
H178 34	Team Working in Computing	✓																						
HF3K 34	Web Technologies 1: HTML and CSS	✓									✓	✓	✓	✓	✓	✓								
H182 34	Systems Development: User Centred Design	✓													✓	✓				✓	✓			✓
HF3F 34	Digital Graphics Fundamentals	✓					✓	✓										✓	✓					
H173 34	Developing Software: Introduction	✓																					✓	
HG2V 34	Digital Design and Web Development: Graded Unit 1																							
HF3M 35	Web Technologies 2: HTML, CSS and JavaScript	✓									✓	✓	✓	✓	✓									
HF57 35	Web Development: Dynamically Generated Content	✓										✓		✓	✓									
HF52 35	Human Computer Interface	✓														✓	✓			✓	✓			✓

Code	Unit Title	National Occupational Standards																						
		IM1	IM5	IM7	IM8	IM9	IM11	IM12	IM14	IM15	IM16	IM18	IM19	IM20	IM21	IM22	IM24	IM25	ESKITU060 — 63	ESKITU070 — 72	ESKITP4032 — 33	ESKITP4062-63	ESKITP5022	TECIT50831
HF3D 35	Designing and Developing an Interactive Product	✓	✓								✓	✓		✓	✓	✓	✓	✓	✓	✓			✓	
HF3E 35	Developing Digital Media for an Interactive Product	✓				✓	✓	✓	✓	✓	✓								✓					
HF53 35	Interactive Media Composition	✓		✓															✓					
HG3H 35	Web Development: Graded Unit 2	✓	✓	✓	✓	✓					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
HG3F 35	Digital Design and Development: Graded Unit 2	✓	✓	✓	✓	✓	✓	✓	✓	✓									✓	✓				

5.3 Mapping of Core Skills development opportunities across the qualification(s)

Some of the Units below have the Core Skills or Core Skills components (at SCQF Level 5 or 6) embedded (E) within the Units, which means learners who achieve the Unit will automatically have their Core Skills profile updated on their certificate. Some of the Units provide the opportunities to develop the Core Skills which are signposted within the Units (S).

Unit code	Unit title	Communication		Numeracy		ICT		Problem Solving			Working with Others	
		Written	Oral	Using Number	Using Graphical Information	Accessing Information	Providing/Creating Information	Critical Thinking	Planning and Organising	Reviewing and Evaluating	Working Co-operatively with Others	Reviewing Co-operative Contribution
HF55 34	User Interface Design	S(5)										
H178 34	Team Working in Computing	S(6)	S(6)			E(6)	E(6)				E(6)	E(6)
HF3K 34	Web Technologies 1: HTML and CSS			S(5)		S(5)	S(5)	S(5)				
H182 34	Systems Development: User Centred Design				S(5)			S(5)	S(5)	S(5)		
HF3F 34	Digital Graphics Fundamentals	S(5)	S(5)			S(5)	S(5)	S(5)	S(5)	S(5)		
H173 34	Developing Software: Introduction							E(6)				
HG2V 34	Digital Design and Web Development: Graded Unit 1											
HF3M 35	Web Technologies 2: HTML, CSS and JavaScript			S(5)		S(5)	S(5)	S(5)	S(5)			
HF57 35	Web Development: Dynamically Generated Content	S(5)						E(6)	E(6)	E(6)		
HF52 35	Human Computer Interface	S(5)										
HF3D 35	Designing and Developing an Interactive Product			S(5)	S(5)	S(6)	S(6)	S(6)	S(6)	S(6)	S(6)	
HG3H 35	Web Development: Graded Unit 2 (Project)	S(6)		S(5)	S(5)	S(6)	S(6)	E(6)	E(6)	E(6)		
HF3E 35	Developing Digital Media for an Interactive Product	S(6)	S(6)			S(6)	S(6)					

Unit code	Unit title	Communication		Numeracy		ICT		Problem Solving			Working with Others	
		Written	Oral	Using Number	Using Graphical Information	Accessing Information	Providing/Creating Information	Critical Thinking	Planning and Organising	Reviewing and Evaluating	Working Co-operatively with Others	Reviewing Co-operative Contribution
HF53 35	Interactive Media Composition											
HG3F 35	Digital Design and Development Graded Unit 2 (Project)	S(6)		S(5)	S(5)			E(6)	E(6)	E(6)		
HF58 34	Web Development: Essential Content							E(6)	E(6)	E(6)		
HF56 35	Web Development: Producing a Data Driven Website							E(6)	E(6)	E(6)		
HF51 34	Digital Media: Video							E(6)	E(6)			
HF50 34	Digital Media: Audio							E(6)	E(6)			
HF4Y 34	Developing Mobile Web Based Applications: An Introduction							E(6)	E(6)			
HF3J 35	Web Development: Tools and Technologies							E(6)	E(6)	E(6)		
HF3G 34	Physical Computing Fundamentals							E(5)	E(5)			

5.4 Mapping of Computational Thinking opportunities across the qualification(s)

"Computational thinking involves solving problems, designing systems, and understanding human behaviour, by drawing on the concepts fundamental to computer science."

Computational thinking is an important competence for computing students. A computing student should be expected to exhibit computational thinking within computing classes and elsewhere. S/he should exhibit the following behaviours:

- 1 systematic approach to problem solving
- 2 appreciate the complexity of a task
- 3 recognise constraints
- 4 break down complex problems
- 5 recognition of the importance of rigour and precision
- 6 consider different scenarios
- 7 consider different solutions
- 8 articulate solutions in a series of steps
- 9 systematic project planning (including time management)
- 10 select appropriate digital tools
- 11 know how to apply digital tools to the problem
- 12 show an appreciation of probabilities and likely Outcomes
- 13 select a solution based on defined criteria
- 14 test and evaluate solutions
- 15 appreciation of human behaviour

Code	Unit title	Computational Behaviours														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
HF55 34	User Interface Design		✓	✓			✓	✓			✓	✓		✓		✓
H178 34	Team Working in Computing	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
HF3K 34	Web Technologies 1: HTML and CSS	✓	✓	✓		✓		✓			✓	✓		✓	✓	✓
H182 34	Systems Development: User Centred Design		✓	✓		✓		✓	✓		✓			✓	✓	✓
HF3F 34	Digital Graphics Fundamentals		✓	✓		✓	✓	✓	✓		✓	✓		✓	✓	
H173 34	Developing Software: Introduction	✓	✓	✓		✓		✓	✓		✓	✓			✓	
HG2V 34	Digital Design and Web Development: Graded Unit 1															
HF3M 35	Web Technologies 2: HTML, CSS and JavaScript	✓	✓	✓	✓	✓		✓	✓		✓	✓		✓	✓	
HF57 35	Web Development: Dynamically Generated Content	✓	✓	✓	✓	✓		✓	✓		✓	✓		✓	✓	
HF52 35	Human Computer Interface		✓	✓				✓			✓				✓	✓
HF3D 35	Designing and Developing an Interactive Product	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
HG3H 35	Web Development: Graded Unit 2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
HF3E 35	Developing Digital Media for an Interactive Product	✓	✓	✓	✓			✓	✓		✓	✓		✓	✓	✓
HF53 35	Interactive Media Composition		✓	✓				✓			✓	✓		✓		✓
HG3F 35	Digital Design and Development: Graded Unit 2	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

5.5 Assessment Strategy for the qualification(s)

The Units listed below are the mandatory Units within the HNC Digital Design and Web Development, HND Web Development and HND Digital Design and Development. The following are the recommended assessment method(s) for each Unit, bearing in mind that there may be more than one assessment in a Unit.

Unit code	Unit title	Assessment			
		Outcome 1	Outcome 2	Outcome 3	Outcome 4
HF55 34	User Interface Design	Closed-book objective test carried out under supervised conditions with a cut off score of 60%. The recommended conditions would be 1 hour for 20 questions.	Open-book assignment where the candidate evaluates two different digital media user interfaces.	Open-book practical exercise where the candidate is given a brief. From the brief, they must produce a requirement specification, design and produce two digital media user interfaces	
H178 34	Team Working in Computing	Assessment for this Unit is based on participation in an ICT project and the candidate's ability to participate effectively in the group activities rather than on successful completion of the project.			
HF3K 34	Web Technologies1: HTML and CSS	Open-book practical assignment where the candidate demonstrates skills in the use of HTML and CSS to build a responsive website using a code editor. It would be advantageous to integrate this assessment with Outcome 2 assessment for Systems Development: User Centred Design			
H182 34	Systems Development: User Centred Design	Closed-book objective test carried out under supervised conditions with a cut off score of 60%. The recommended conditions would be 1 hour for 20 questions.	Open-book assessment that may take the form of a portfolio where candidates are able to build up the required evidence as they work through the practical learning activities. It would be advantageous to integrate this assessment with the practical assignment for Web Technologies HTML and CSS or another appropriate practical Unit assessment.		

Unit code	Unit title	Assessment		
		Outcome 1	Outcome 2	Outcome 3
HF3F 34	Digital Graphics Fundamentals	Closed-book objective test carried out under supervised conditions with a cut off score of 60%. The recommended conditions would be 1 hour for 20 questions. Another option that could be considered is an extended response in the form of a report or presentation. This would be an open-book assessment. The recommended time would be 3 hours.	Practical tasks that cover Outcomes 2 and 3 to be carried out under supervised and unsupervised conditions. Another method which could be considered suitable depending on the context/approach of delivery of the Unit is a portfolio. The evaluation of the end product could be a brief report (eg 300 words) or presentation (eg 2 minutes) where the focus is on the quality and process.	
H173 34	Developing Software: Introduction	Practical tasks for each Outcome or a single task that covers all Outcomes. To be carried out under open-book, controlled supervised conditions.		
HG2V 34	Digital Design and Web Development: Graded Unit 1 (Exam)	Closed-book examination lasting three hours. The examination should provide the learner with the opportunity to produce evidence that demonstrates she/he has met the aims of this Graded Unit.		
HF3M 35	Web Technologies 2: HTML, CSS and JavaScript	Open-book practical assignment where the candidate demonstrates skills in the use of HTML, CSS and JavaScript. Evidence of practical competence may be produced over an extended period of time under supervised and unsupervised conditions.		
HF57 35	Web Development: Dynamically Generated Content	Closed-book objective test carried out under supervised conditions with a cut off score of 60%. The recommended conditions would be 1 hour for 20 questions.	Open-book web application development project that integrates assessments for Outcomes 2, 3, and 4. The assessment should be carried out over an extended period under supervised and unsupervised conditions.	
HF52 35	Human Computer Interface	Open-book holistic assessment in the form of a case study that integrates each of these Outcomes. The assessment should be carried out over an extended period. It would be advantageous to integrate this assessment with the practical assignment for either Web Technologies 2: HTML, CSS and JavaScript, Designing or Developing an Interactive Media Product or Web Development: Dynamically Generated Content.		

Unit code	Unit title	Assessment			
		Outcome 1	Outcome 2	Outcome 3	Outcome 4
HF3D 35	Designing and Developing an Interactive Product	Open-book practical assignment that covers all Outcomes for this Unit. The candidate will be required to plan and design, create, test and evaluate an interactive product based on a given brief. The assessment should be carried out over an extended period under supervised and unsupervised conditions. It may be advantageous to combine this assessment with Human Computer Interface			
HF3E 35	Developing Digital Media for an Interactive Product	Open-book assignment where the candidate is required to research and report on the subject of intellectual property and copyright law. The assessment should be carried out over an extended period under supervised and unsupervised conditions.	Open-book assignment where candidate can carry out practical tasks to enable them to report on the key concepts relating to the technical limitations of digital platforms. The assessment should be carried out over an extended period under supervised and unsupervised conditions.	Open-book practical assignment where the student is given a brief to fulfil for the creation of digital media content. It may be advantageous to link this to the project <i>Designing and Developing an Interactive Product</i> . The assessment should be carried out over an extended period under supervised and unsupervised conditions.	
HF53 35	Interactive Media Composition	Open-book assignment where the candidate has to carry out research and document the analysis of at least three interactive digital media products. The evidence could take the form of an illustrated report or presentation. The assessment should be completed on an individual basis under supervised conditions.	Open-book practical task where the candidate has to design a solution for a given interactive media product brief that applies the key theories of composition. The assessment should be completed on an individual basis under supervised conditions. It would be advantageous to integrate this assessment with the practical assignment for Web Technologies HTML, CSS and JavaScript, Developing Digital Media for an Interactive Product or another appropriate Unit.		

Unit code	Unit title	Assessment			
		Outcome 1	Outcome 2	Outcome 3	Outcome 4
HG3F 35	Digital Design and Development: Graded Unit 2 (Project)	All Outcomes: Practical Assignment. The candidate will be required to provide documentation which supports evidence of the candidate's ability to plan, develop, implement and evaluate technical skills gained throughout their course. The project is a complex task which consists of three stages: planning; developing; and evaluating			
HG3H 35	Web Development Graded Unit 2 (Project)	All Outcomes: Practical Assignment. The candidate will be required to provide documentation which supports evidence of the candidate's ability to plan, develop, implement and evaluate technical skills gained throughout their course. The project is a complex task which consists of three stages: planning; developing; and evaluating.			

5.6 Vendor Certification

Vendors can have their curriculum credit rated and levelled for SCQF by SQA. Colleges in Scotland are also able to carry out this work directly for the vendor. Vendor can then request for Units to be included in specific frameworks as optional Units (up to 25% of the credits).

The following vendors have curriculum that correlates with SQA Units within these awards:

CIW (vendor-neutral IT and Web technology education and certification program)

CIW Web and Mobile Design series

- ◆ CIW Advanced HTML5 and CSS3 Specialist — NOW AVAILABLE
- ◆ CIW User Interface Designer — NOW AVAILABLE
- ◆ CIW Multimedia Specialist (scheduled for release August 2016)
- ◆ CIW Mobile Application Developer (scheduled for release August 2016)

CIW Web Foundations Associate

Microsoft

- ◆ Exam 70-480 Programming in HTML5 with JavaScript and CSS3
- ◆ Exam 70-481 Essentials of Developing Windows Store Apps Using HTML5 and JavaScript

Adobe

Adobe Certified Expert (ACE) in

- ◆ Illustrator
- ◆ Photoshop
- ◆ After Effects
- ◆ Premiere

Oracle

- ◆ MySQL Certifications

6 Guidance on approaches to delivery and assessment

The content of the revised HNC has been designed to replace the HNC Interactive Media by providing an up-to-date award that reflects the dynamic industry of digital design and web development by embracing the current and evolving technologies and tools. Since the original HNC Interactive Media award was created in 2009, there have been massive changes in everything digital.

The HNC has been designed to be flexible in that it includes a broad selection of subject areas that form a solid foundation for anyone wanting to work in the digital industries. The core Units cover interface design, user-centred design process, an introduction to software development, the core web languages of HTML and CSS, the fundamentals of digital graphics and working within a team. This will allow learners to experience a variety of subjects that will provide the essential knowledge and skills to progress to either HND Web Development or HND Digital Design and Development.

Learners are not required to be particularly skilled in either design or coding when they start this course but it is important that the centre advises on progression opportunities, the interests and key skills required by the two HND streams.

The HNC core covers the essential skills that both designers and developers require:

- (a) code using at least HTML and CSS
- (b) be able to follow design principles to produce an interface that suits the target end users
- (c) understand that the user is at the centre of all design decisions
- (d) be able to manipulate, edit and optimise graphics
- (e) planning, designing and testing
- (f) working individually and working as part of a team

The Unit Developing Software: Introduction is has been included to give every learner an opportunity to have a taste of programming. This Unit can be delivered using a variety of languages but for this course it is recommended that JavaScript is used. This is the third essential language required for all web and app development.

The remaining options selected for the HNC award is at the discretion of the centre.

The HND Digital Design and Development core Units give the learners the opportunity to specialise in a variety of digital content development as well as the opportunity to learn more about front-end web and app development.

The HND Web Development core Units give the learners the opportunity to specialise in back-end web development as well as more advanced front-end languages.

Delivery of these Units need not be resource intensive due the abundance of high quality open source software tools available.

In addition there are also a huge amount of on-line tutorials, videos and apps that can be used as learning and teaching resources.

There are suggested sequencing and integration of Units for both delivery and assessment in the following sections.

6.1 Sequencing/integration of Units

The order in which Units within the award are delivered is at the discretion of the centre and should be appropriate to local staffing and timetabling considerations. The following delivery sequences are offered for guidance only. The optional Units selected by the centre should reflect the requirements of the skills required by the local job market, progression options and articulation agreements.

Where the award is being delivered on a part-time basis, the subjects recommended for the first semester within the full-time model of delivery should be delivered in the first academic session of the part-time delivery. Subjects recommended for semester two delivery in the full-time model should be delivered in the second academic session of the part-time delivery model.

Although an to be awarded an HNC, 12 credits are required including all core Units, it is important to remember that an HND award is made up 30 credits so it is advisable to deliver more than the minimum 12 credits in year 1.

Suggested HNC delivery sequence for centres who intend to offer progression on to either HND Web Development or the HND Digital Design and Development.

The proposed delivery framework comprises 12 credits for an HNC, however for learners progressing on to HND year 2, it is advisable that they are offered additional options to make up 15 credits. The table at the end offers a suggestion for additional optional Units.

It is recommended that the 5 component Units of the Digital Design and Web Development: Graded Unit 1 are delivered before the Graded Unit 1 exam takes place. The following sequence of delivery has 4 of the component Units in Semester 1.

Semester 1 Core
User Interface Design
Web Technologies HTML and CSS
Systems Development: User Centred Design
Digital Graphics- Fundamentals
4 credits

Semester 1 Options (HND DD)	Semester 1 Options (HND Web Dev)
Digital Media: Audio	Web Development: Essential Content
Digital Media: Video	
2 credits	2 credits

Semester 2 Core
Developing Software: Introduction
Team Working in Computing
Digital Design and Web Development: Graded Unit 1 (Exam)
3 credits

Semester 2 Options (HND DD)	Semester 1 Options (HND Web Dev)
Compositing Motion Graphics	Web Development: Content Management Systems (CMS)
Digital Media: Vector Techniques	Manage Database Systems using SQL
Digital Media: Bitmap Techniques	
3 credits	3 credits

Additional Options HND DD	Additional Options HND WD
<i>2D Animation</i>	<i>Developing Mobile Web Based Apps: An Introduction</i>
<i>Graphic Design</i>	<i>Web Development: Website Optimisation</i>
Additional 3 credits	Additional 3 credits

HND Web Development Year 2 — option 1

This suggested delivery framework is intended for centres who wish to provide job-ready learners with an HND or articulation to University degrees in Web Development.

Semester 1	
Web Technologies 2: HTML, CSS and JavaScript	1
Human Computer Interface	1
Designing and Developing an Interactive Product	2
Interactive Media Composition	1
Client-side Scripting for Web Applications	2
Digital Marketing Fundamentals	1
	8 Credits

Semester 2	
Web Development: Dynamically Generated Content	2
Web Development: Tools and Techniques	2
e-commerce solutions	1
Web Development: Graded Unit 2	2
	7 Credits

HND Web Development Year 2 — option 2

This suggested sequence of delivery is intended for centres who have degree articulation opportunities to universities offering 2nd or 3rd entry into Computing, Computing Science and Software Development Degrees

Semester 1	
Web Technologies 2: HTML, CSS and JavaScript	1
Human Computer Interface	1
Designing and Developing an Interactive Product	2
Software Development:: Object Oriented Analysis and Design	2
Client-side Scripting for Web Applications	2
	8 Credits

Semester 2	
Web Development: Dynamically Generated Content	2
Software Development: Object Oriented Programming	2
Software Development: Data Structures	1
Web Development: Graded Unit 2	2
	7 Credits

HND Digital Design and Development Year 2

Semester 1	
Developing Digital Media for an Interactive Product	2
Human Computer Interface	1
Designing and Developing an Interactive Product	2
Interactive Media Composition	1
Web Development: Essential Content	2
	8 Credits

Semester 2	
3D Level Editing	1
Game Design	2
2D Digital Imaging and Animation	2
Digital Design and Development: Graded Unit 2	2
	7 Credits

OR

Semester 2	
Client-side Scripting for Web Applications	2
Professional and Legal Issues for Web and Digital Content Developers	1
2D Digital Imaging and Animation	2
Digital Design and Development: Graded Unit 2	2
	7 Credits

The benefit of such so-called 'cross-assessment', if it goes well, is the achievement of several Outcomes on several Units with just one assessment instrument. A matching disadvantage is that a failure results in several Units not being achieved. It would be wise for centres to consider separating out the 'retake' assessments of learners who have failed in their first attempt at a composite assessment instrument. It may be possible to combine the delivery of Units in such a way as to create a thematic delivery of the component Units. The ways in which Units may be integrated is left to centres but thematic delivery, as opposed to discrete Unit delivery, may reduce assessment and improve coherence of content.

It would be appropriate to deliver and cross-assess the following groups of Unit:

HNC Digital Design and Web Development

Group 1

- ◆ Web Technologies HTML and CSS
- ◆ Systems Development: User Centred Design
- ◆ Web Development: Essential Content

Group 2

- ◆ Digital Graphics Fundamentals
- ◆ Digital Media: Bitmap Techniques
- ◆ Digital Media: Vector Techniques

HND Web Development

Group 1

- ◆ Human Computer Interface
- ◆ Designing and Developing an Interactive Product
- ◆ Interactive Media Composition

Group 2

- ◆ Web Technologies 2: HTML, CSS and JavaScript
- ◆ Client-side Scripting for Web Applications

Group 3

- ◆ Software Development: OO Analysis and Design
- ◆ Software Development: OO Programming
- ◆ Software Development: Data Structures

HND Digital Design and Development

Group 1

- ◆ Developing Interactive Media Elements
- ◆ Human Computer Interface
- ◆ Designing and Developing an Interactive Product
- ◆ Interactive Media Composition

Group 2

- ◆ 3D Level Editing
- ◆ Game Design
- ◆ 2D Digital Imaging and Animation

6.2 Recognition of Prior Learning

SQA recognises that learners gain knowledge and skills acquired through formal, non-formal and informal learning contexts.

In some instances, a full Group Award may be achieved through the recognition of prior learning. However, it is unlikely that a learner would have the appropriate prior learning and experience to meet all the requirements of a full Group Award.

The recognition of prior learning may **not** be used as a method of assessing in the following types of Units and assessments:

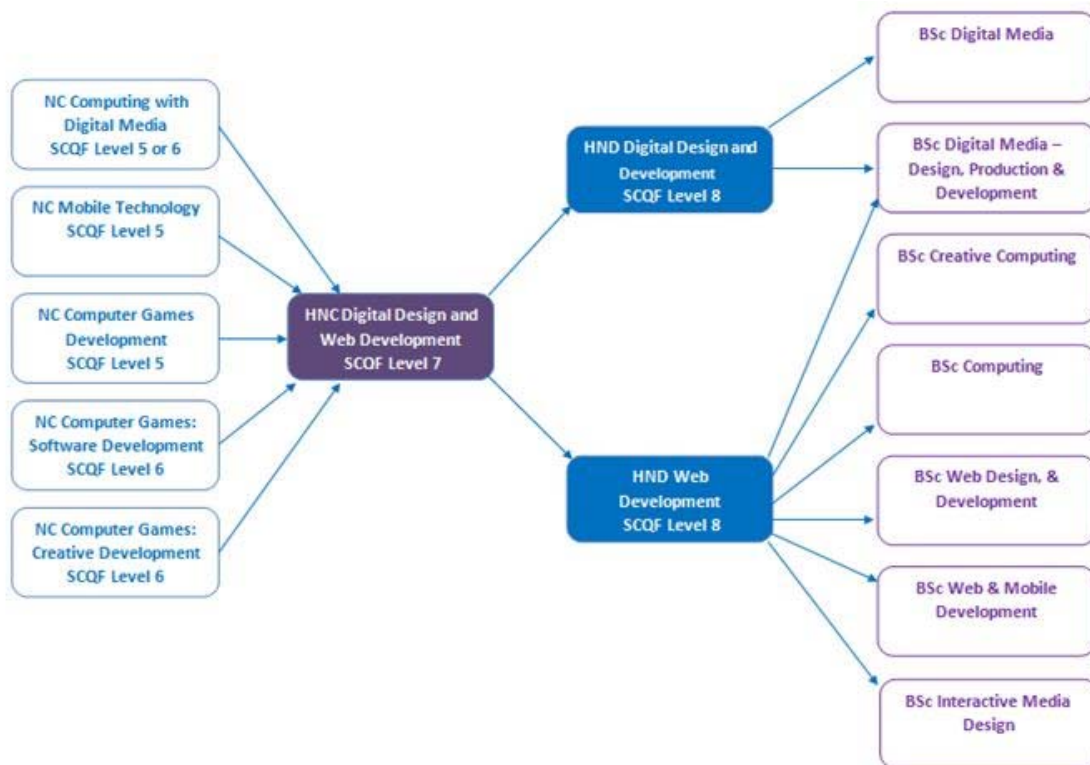
- ◆ HN Graded Units
- ◆ Course and/or external assessments
- ◆ Other integrative assessment Units (which may or not be graded)

- ◆ Certain types of assessment instruments where the standard may be compromised by not using the same assessment method outlined in the Unit
- ◆ Where there is an existing requirement for a licence to practice
- ◆ Where there are specific health and safety requirements
- ◆ Where there are regulatory, professional or other statutory requirements
- ◆ Where otherwise specified in an Assessment Strategy

More information and guidance on the *Recognition of Prior Learning (RPL)* may be found on our website www.sqa.org.uk.

The following sub-sections outline how existing SQA Unit(s) may contribute to this Group Award. Additionally, they also outline how this Group Award may be recognised for professional and articulation purposes.

6.2.1 Articulation and/or progression



The awards have been designed to allow learners to progress to degree level study. Several universities have confirmed that, in principle, learners who achieve the HND Digital Design and Development and HND Web Development will be suitable for direct entry into either year two or year three of their related courses.

University degree programmes are continually under review and the following information is accurate at the time of writing of this Group Award specification.

Robert Gordon University, Aberdeen

BSc (Hons) Digital Media - Design, Production and Development

HND Digital Design and Development and HND Web Development allowing learners with a 30 credit HND direct entry into stage 3 of the BSc (Hons) Digital Media (Design, Production and Development) course.

Options required:

- ◆ 2 credits from Client Side Web Scripting (preferably using JavaScript),
- ◆ 2 credits from Database Development,
- ◆ 2 credits from Web Design,
- ◆ 2 credits from Developing Multimedia/Computer Graphics applications
- ◆ 1 credit Professional Issues
- ◆ 6 credits could come from any of the options, preferably in the areas of Web Development or Multimedia Development.

Napier University, Edinburgh

BSc/BSc (Hons) Web Design and Development
BSc (Hons) Creative Computing

BSc/BSc (Hons) Digital Media

Mandatory Options:

- ◆ Web Design and Development
- ◆ Web Technologies HTML
- ◆ CSS and JavaScript compulsory

BSc/BSc (Hons) Interactive Media Design

Mandatory Options:

- ◆ Interactive Media Design
- ◆ Physical Computing

Glasgow Caledonian University

BSc (Hons) Computing

HND Articulation Requirements for Software Engineering (SE) Suite UG programmes in CCIS: BSc Computing (G401) stage 3

HND Web Development

Must include all of the following Units:

- ◆ (H171 35) Software Development: Object Oriented Programming
- ◆ (H172 35) Software Development: Object Oriented Analysis and Design
- ◆ (H16Y 35) Software Development: Data Structures

Must include one of:

- ◆ (DV6E 34) Database Design Fundamentals **OR**
- ◆ (F1VY 34) Manage Database Systems Using SQL

University of the West of Scotland, Paisley Campus

BSc (Hons) Web and Mobile Development

HND Digital Design and Development and HND Web Development appropriate for year 3 entry onto the Web and Mobile Development programme.

No Units specified as long as they included JavaScript, SQL and a server side language, eg PHP or ASP.net

6.2.2 Professional Recognition

There is no professional recognition for these awards. Discussions with relevant professional bodies are on-going.

6.2.3 Transitional Arrangements

HN awards in Multimedia Computing related areas have a long tradition of providing detailed guidance on credit transfer between existing and new awards. This is done, at the request of centres and External Verifiers, to ensure consistency between centres. Credit transfer tables have been provided in this subject area since 1999. However, final decisions relating to credit transfer lies with centres.

Section 6.2.4 has been populated with equivalent Units which have been approved by an External Verifier. The External Verifier uses specific criteria to determine when two Units are equivalent and one can provide credit for another. Many of the 'new' (2015/16) Units in this table are revisions of the 'old' (2007/8) Units, making credit transfer more credible and easier to identify. Units within Multimedia related frameworks prior to 2004 are not eligible for credit transfer into the new framework due to the importance of contemporary skills in this sector.

6.2.4 Credit transfer

This credit transfer table relates to HNC Digital Design and Web Development, HND Digital Design and Development and HND Web Development which are due for validation in June 2016. These courses will replace the following older Group Awards:

G8LT 15 HNC Interactive Media
G9AY 16 HND Interactive Media

These Group Awards have been available since 2007/8 and themselves replaced older Group Awards, dating back to 2000. This guidance covers **full** credit transfer from Units in the 2007/8 Group Awards to Units in the 2015/16 Group Awards.

When new Group Awards are introduced, learners often wish to transfer between the old and the new frameworks. For example, they may have started on an HNC under an older framework and wish to complete their HND on the new framework, or they may have completed Units some time ago and wish to use these as part of an HNC or HND under the new framework.

To assist in this process, SQA normally provides centres with guidance on Credit Transfer between the old and the new frameworks. SQA have clear criteria for deciding if two syllabuses are equivalent. All the following criteria must be satisfied if full credit transfer is to be recognised between both syllabuses:

- 1 The syllabuses have the same SCQF levels.
- 2 The syllabuses have the similar credit values (or equivalent).
- 3 The syllabuses are equivalent in terms of Core Skill coverage.
- 4 The syllabuses relate to the same subject area and the main topics are common to both.
- 5 The syllabuses present a similar level of cognitive demand.
- 6 The syllabuses encompass similar skill-sets.
- 7 The syllabuses are contemporary in terms of terminology, techniques and technology.
- 8 Employers, admission officers and other users would perceive both syllabuses as broadly equivalent.
- 9 The assessment demands are similar in terms of candidate activity and Performance Criteria, or candidates would be equally likely to pass both assessments.
- 10 Special conditions (where they exist) are applicable to both syllabuses.

The table below provides details on where it is considered that the knowledge and skills development in a 2007/8 Unit is sufficiently similar to justify credit transfer to the 2015/16 Unit. However, the final decision on whether or not to grant credit transfer remains with the centre.

2007/8 GROUP AWARD UNITS		2015/16 GROUP AWARD UNITS	
Unit No.	Unit title	Unit No.	Unit title
F6JJ 34	Building an e-Business	F6JJ 34	Building an e-Business
F1VW 34	Client Side Scripting for Web Applications	HF4X 34	Client Side Scripting for Web Applications
H2X8 35	Designing and Developing an Interactive Media Product	HF3D 35	Designing and Developing an Interactive Product
H17J 34	Developing Mobile Web Based Applications	HF4Y 34	Developing Mobile Web Based Applications

	2007/8 GROUP AWARD UNITS		2015/16 GROUP AWARD UNITS	
Unit No.	Unit title		Unit No.	Unit title
F6BS 35	Digital Imaging: Advanced Bitmap Techniques		F6BS 35	Digital Imaging: Advanced Bitmap Techniques
F6BT 35	Digital Imaging: Advanced Vector Techniques		F6BT 35	Digital Imaging: Advanced Vector Techniques
F1YX 34	Digital Imaging: Bitmap and Vector		HF3F 34	Digital Graphics Fundamentals
F20C 34	Digital Media: Audio		HF50 34	Digital Media: Audio
F207 34	Digital Media: Bitmap Techniques		HF86 34	Digital Media: Bitmap Techniques
F208 34	Digital Media: Vector Techniques		HF87 34	Digital Media: Vector Techniques
F20D 34	Digital Media: Video		HF51 34	Digital Media: Video
F6BV 35	Human Computer Interface		HF52 35	Human Computer Interface
FW2V 35	Interactive Media Composition		HF53 35	Interactive Media Composition
F21G 34	Interactive Media: Graded Unit 1 (Exam)		HG2V 34	Digital Design and Web Development: Graded Unit 1 (Exam)
H4LF 35	Interactive Media: Graded Unit 2 (Project)		HG3H 35HG3F 35	Web Development: Graded Unit 2 (Project) OR Digital Design and Development: Graded Unit 2 (Project)
F6BY 35	Professional and Legal Issues for Interactive Media Developers		HF54 35	Professional and Legal Issues for Interactive Media Developers
DM30 35	Project Management 1		H17D 34	Computing: Introduction to Project Management
DH32 35	Software Development: Developing for the World Wide Web		H1J9 35	Software Development: Developing Websites for Multiplatform Use
H17W 34	Software Development: Developing Small Scale Standalone Applications		H17W 34	Software Development: Developing Small Scale Standalone Applications
F1VV 34	User Interface Design		HF55 34	User Interface Design
F6C2 35	Web Development: Dynamically Generated Content		HF57 35	Web Development: Dynamically Generated Content
F1YY 34	Web Development: Essential Content		HF58 34	Web Development: Essential Content
F6C4 35	Web Development: Producing a Data Driven Website		HF57 35	Web Development: Producing a Data Driven Website
DH21 34	Working Within a Project Team AND		H178 34	Team Working in Computing
D75X 34	Information Technology: Applications Software 1			

6.3 Opportunities for e-assessment

As part of an assessment strategy, centres are encouraged to investigate the option of e-assessment to support the awards. E-assessment may take a number of forms, and while it may be feasible in the future to conduct all assessment in an on-line format, currently some formats are more amenable to e-assessment than others.

The most obvious format is that of objective tests, eg multiple-choice or short-response tests, and some SQA Units already have an Evidence Requirements mandating the use of this type of test. Centres could adopt tests supported by SOLAR (www.sqasolar.org.uk) where appropriate.

Below is a sample from within the core Units of the Group Award of where the possibility of e-assessment may exist:

Multiple-choice/Multiple-response/Short-response		
Unit title	Code	Outcome
User Interface Design	HF55 34	1
Systems Development: User Centred Design	H182 34	1
Digital Graphics Fundamentals	HF3F 34	1
Web Development: Dynamically Generated Content	HF57 35	1

E-portfolio opportunities		
Unit title	Code	Outcome
Systems Development: User Centred Design	H182 34	2
Digital Graphics Fundamentals	HF3F 34	2 and 3
Web Development: Dynamically Generated Content	HF57 35	Documentation
Team Working in Computing	H178 34	Individual and collaborative documentation
Designing and Developing an Interactive Product	HF3D 35	Documentation
Developing Digital Media for an Interactive Product	HF3E 35	Documentation

6.4 Support materials

A list of existing ASPs is available to view on SQA's website.

6.5 Resource requirements

The following advice on resources is important to facilitate delivery of the HNC Digital Design and Web Development, HND Web Development or the HND Digital Design and Development.

Due to the continual evolution in tools and technologies associated with these awards it is important for centres to support staff in keeping up to date with what is going on in the digital industry. Simple steps like following reputable blogs, websites and social media that offer professional resources for digital/web developers and designers is hugely beneficial.

There are excellent on-line resources available for tutorial in languages associated with the web and mobile app development and software tools. These can be both free and subscription based and many of them are available in video tutorial format.

Another recommendation is to attend national and international conferences as these can be a brilliant source of information as well as highly motivational.

It is important to use industry standard tools but for coding web languages there are many high quality, open source, free tools available which are more than suitable. Every modern web browser includes a powerful suite of developer tools. These tools do a range of things, from inspecting currently-loaded HTML, CSS and JavaScript to showing which assets the page has requested and how long they took to load.

For teaching graphics, video, sound and animation it may be beneficial to have access to industry standard software, however there are cloud and web based versions of suitable software available.

7 General information for centres

Equality and inclusion

The Unit specifications making up this Group Award have been designed to ensure that there are no unnecessary barriers to learning or assessment. The individual needs of learners will 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

Internal and external verification

All instruments of assessment used within this/these qualification(s) should be internally verified, using the appropriate policy within the centre and the guidelines set by SQA. External verification will be carried out by SQA to ensure that internal assessment is within the national guidelines for these qualifications.

Further information on internal and external verification can be found in *SQA's Guide to Assessment* (www.sqa.org.uk/GuideToAssessment).

8 Glossary of terms

Embedded Core Skills: is where the assessment evidence for the Unit also includes full evidence for complete Core Skill or Core Skill components. A learner successfully completing the Unit will be automatically certificated for the Core Skill. (This depends on the Unit having been successfully audited and validated for Core Skills certification.)

Finish date: The end of a Group Award's lapsing period is known as the finish date. After the finish date, the Group Award will no longer be live and the following applies:

- ◆ candidates may not be entered for the Group Award
- ◆ the Group Award will continue to exist only as an archive record on the Awards Processing System (APS)

Graded Unit: Graded Units assess learners' ability to integrate what they have learned while working towards the Units of the Group Award. Their purpose is to add value to the Group Award, making it more than the sum of its parts, and to encourage learners to retain and adapt their skills and knowledge. (**Note to writer:** delete if not applicable to product type)

Lapsing date: When a Group Award is entered into its lapsing period, the following will apply:

- ◆ the Group Award will be deleted from the relevant catalogue
- ◆ the Group Award specification will remain until the qualification reaches its finish date at which point it will be removed from SQA's website and archived
- ◆ no new centres may be approved to offer the Group Award
- ◆ centres should only enter candidates whom they expect to complete the Group Award during the defined lapsing period

SQA credit value: The credit value allocated to a Unit gives an indication of the contribution the Unit makes to an SQA Group Award. An SQA credit value of 1 given to an SQA Unit represents approximately 40 hours of programmed learning, teaching and assessment.

SCQF: The Scottish Credit and Qualification Framework (SCQF) provides the national common framework for describing all relevant programmes of learning and qualifications in Scotland. SCQF terminology is used throughout this guide to refer to credits and levels. For further information on the SCQF visit the SCQF website at www.scqf.org.uk.

SCQF credit points: SCQF credit points provide a means of describing and comparing the amount of learning that is required to complete a qualification at a given level of the Framework. One National Unit credit is equivalent to 6 SCQF credit points. One National Unit credit at Advanced Higher and one Higher National Unit credit (irrespective of level) is equivalent to 8 SCQF credit points.

SCQF levels: The level a qualification is assigned within the framework is an indication of how hard it is to achieve. The SCQF covers 12 levels of learning. HNCs and HNDs are available at SCQF levels 7 and 8 respectively. Higher National Units will normally be at levels 6–9 and Graded Units will be at level 7 and 8. National Qualification Group Awards are available at SCQF levels 2–6 and will normally be made up of National Units which are available from SCQF levels 2–7.

Subject Unit: Subject Units contain vocational/subject content and are designed to test a specific set of knowledge and skills.

Signposted Core Skills: refers to opportunities to develop Core Skills arise in learning and teaching but are not automatically certificated.

History of changes

It is anticipated that changes will take place during the life of the qualification and this section will record these changes. This document is the latest version and incorporates the changes summarised below. Centres are advised to check SQA's APS Navigator to confirm they are using the up to date qualification structure.

NOTE: Where a Unit is revised by another Unit:

- ◆ No new centres may be approved to offer the Unit which has been revised.
- ◆ Centres should only enter candidates for the Unit which has been revised where they are expected to complete the Unit before its finish date.

Version Number	Description	Date
03	Revision of Unit: HH3G 34: Pitch a treatment, F8R6 34: Game Design Theory, F8R5 34: Character Creation and Storytelling, F6BX 35: Narrative and Genre (double credit) Added to Optional section of Frameworks for GL7Y 15 HNC Digital Design and Web Development and GL80 16 HND Digital Design and Development.	14/05/2018
02	GL80 16 Revision of Unit: F8L2 35 Game Customisation and Scripting has been replaced by HH3E 35 Game Customisation and Scripting.	18/11/2016

Acknowledgement

SQA acknowledges the valuable contribution that Scotland's colleges have made to the development of this qualification.

9 General information for learners

This section will help you decide whether this is the qualification for you by explaining what the qualification is about, what you should know or be able to do before you start, what you will need to do during the qualification and opportunities for further learning and employment.

The HNC Digital Design and Web Development qualification has two fundamental aims – to teach you:

- (a) How to design digital content to be used within websites, apps, interactive media and games and
- (b) How to design and develop successful websites and apps by focusing on the interface design, and the user experience.

Ideally you should have an interest in the digital industries, have some experience using computer systems and have gained some relevant SCQF level 6 and level 5 qualifications prior to undertaking this qualification but remember entrance to the qualification is at the discretion of the delivery centre.

The HNC will provide a good foundation for further study in either of these areas. After successful completion of the HNC you may move on to study at a higher level at college or use the award to articulate to a degree course. This HNC has been designed to articulate to both the HND Web Development year 2 and the HND Digital Design and Development year 2.

The HND Web Development qualification has been designed to prepare you for employment in varying roles at varying levels in the web/app design and development and digital media and marketing industries. It will help you develop a range of specialist knowledge and skills in front end and back end web development which includes programming as well as develop your knowledge and understanding of the user centred design approach to facilitate effective user interfaces (UI) and user experiences (UX).

The HND Digital Design and Development qualification has been designed to prepare you for employment in varying roles at varying levels in the web and app design and digital media and marketing industries. It will help you develop a range of specialist knowledge and skills in the design and creation of digital content including images, animation, audio, video and game assets.

Successful completion of the qualification could be your first step towards a challenging and exciting career in the digital industries.

Both HND qualifications may allow you to articulate to a degree course at 2nd or 3rd level.