**SQA**

# Group Award Specification for:

**HNC Technologies in Business**
**HND Technologies in Business**

**Group Award Code: GN5N 15**
**GN5P 16**

**Validation date: November 2017**

**Date of original publication: January 2018**

**Version: 03 (April 2020)**

# Contents

# 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.

HNC/HND Information Technology was first introduced in 2006 in response to growing demand for generic IT skills among non-computing professionals. It was initially popular in centres but, latterly, its popularity has declined both in terms of the number of centres that offer it and the number of learners who choose to take it. This decline in popularity reflected the general trend away from generic ICT skills towards more focussed skills in areas such as software development, networking and cyber security. As a result, significant changes were made to the award and a new focus was introduced. These significant changes were reflected in a new title for the award.

Over the last 15 years, the IT industry has undergone a transformation as technology has permeated all areas of business. In most organisations IT has changed from a support department installing and troubleshooting systems to a key enabler of business strategy and competitiveness, applying digital solutions to business problems.

The HNC Technologies in Business award is a hybrid qualification designed to address the business need for multi skilled individuals possessing the IT, business and inter-personal skills required for the 21st century digital economy.

The HND Technologies in Business award is designed for learners who wish to pursue a business career in the digital economy. The award provides learners with the essential and highly sought after mix of technology and business skills that enables them to progress to further academic and professional qualifications before embarking on a career in a diverse range of business areas within the public and private sector.

The course has been structured to provide learners with a background in business operations, technology, project management and entrepreneurship to allow them to seek employment in a wide variety of sectors.

The awards consist of a core-and-option structure. The list of options is large. The composition of mandatory units together with a wide range of options encompassing IT, software and systems, infrastructure, business and languages is designed to appeal to a wide range of potential learners. Having a relatively small number of mandatory units in both the awards and a wide range of options allows centres a high degree of flexibility in course design to maximise the number of articulation routes to university degree courses.

The HNC and HND awards will prepare learners for entry to a wide range of positions. Depending on their area of specialisation, they could develop a career in the following:

♦ IT management
♦ Project management
♦ Business analysis
♦ Technology consultancy
♦ Data management

The awards are suitable for a wide range of learners including:

♦ school leavers
♦ adult returners to education
♦ those in employment who wish to enhance their career prospects

# 2 Qualifications structure

## 2.1 Structure

The frameworks below illustrate the composition of the mandatory and optional parts of the awards, and the SQA credit value and SCQF level of each unit.

A mapping of Core Skills development opportunities is available in Section 5.2.

**HNC Technologies in Business**

The HNC Group Award is made up of 12 SQA credits (96 SCQF points), of which 8 credits (64 points) are mandatory and 4 credits (32 points) are optional.

**Mandatory units (8 credits)**

| 4 code | 2 code | Unit title | SCQF level | SCQF credit points | SQA credit |
|--------|--------|------------|------------|--------------------|------------|
| HT9K | 34 | Business Process Management: Introduction | 7 | 8 | 1 |
| H7TK | 34 | Communication: Business Communication | 7 | 8 | 1 |
| HT9V | 34 | Cyber Resilience | 7 | 8 | 1 |
| H1F7 | 34 | Professionalism and Ethics in Computing | 7 | 8 | 1 |
| HT9N | 34 | Project Management Methodologies: Introduction | 7 | 8 | 1 |
| H8W8 | 34 | Big Data | 7 | 8 | 1 |
| DV6J | 34 | Functional Areas of Business | 7 | 8 | 1 |
| HX4R | 34 | Technologies in Business: Graded Unit 1 (Exam) | 7 | 8 | 1 |

## Optional units (a minimum of 4 credits)

A minimum of four credits must be achieved from the following table. Please note the minimum requirement for each group apart from the language units.

### Group 1 — Infrastructure (a minimum of 1 credit required)

| 4 code | 2 code | Unit title | SCQF level | SCQF credit points | SQA credit |
|---|---|---|---|---|---|
| HT9G | 34 | Network Security Concepts | 7 | 16 | 2 |
| HT9L | 34 | Computer Networking: Introduction for Business | 7 | 8 | 1 |
| HF85 | 34 | Emerging Technologies and Experiences | 7 | 8 | 1 |
| H179 | 34 | Cloud Computing | 7 | 8 | 1 |
| H17S | 34 | Network Concepts | 7 | 16 | 2 |
| HT9F | 35 | Database Server Administration | 8 | 16 | 2 |
| HT9M | 35 | Introduction to Mobile Device Management (MDM) and Mobile Application Management (MAM) | 8 | 8 | 1 |
| H17R | 35 | Mobile Technology | 8 | 8 | 1 |
| H8N5 | 35 | Private Cloud Virtualisation | 8 | 8 | 1 |

### Group 2 — IT/Computer Science (a minimum of 1 credit required)

| 4 code | 2 code | Unit title | SCQF level | SCQF credit points | SQA credit |
|---|---|---|---|---|---|
| H8XP | 33 | Mathematics for Science 1 | 6 | 8 | 1 |
| H8XT | 33 | Statistics for Science 1 | 6 | 8 | 1 |
| F84X | 34 | IT in Business: Databases | 7 | 8 | 1 |
| HH83 | 34 | IT in Business: Spreadsheets | 7 | 8 | 1 |
| HT9T | 34 | Artificial Intelligence | 7 | 8 | 1 |
| H8XV | 34 | Statistics for Science 2 | 7 | 8 | 1 |
| H7K1 | 34 | Engineering Mathematics 2 | 7 | 8 | 1 |
| J45X | 34* | Statistics for Business | 7 | 8 | 1 |
| H8W9 | 35 | Data Science | 8 | 16 | 2 |
| HH7V | 35 | Computer Systems and Organisation | 8 | 8 | 1 |

## Group 3 — Business (a minimum of 1 credit required)

| 4 code | 2 code | Unit title | SCQF level | SCQF credit points | SQA credit |
|--------|--------|-----------|-----------|-------------------|-----------|
| F84M | 34 | Business Accounting | 7 | 16 | 2 |
| H7V6 | 34 | Developing Entrepreneurial Skills | 7 | 8 | 1 |
| HG1N | 34 | Digital Marketing: Fundamentals | 7 | 8 | 1 |
| HG1K | 34 | Professional Career Development in the IT Industry | 7 | 8 | 1 |
| HJ4W | 34 | Work Placement | 7 | 8 | 1 |
| H1F0 | 34 | Creating a Culture of Customer Care | 7 | 8 | 1 |
| H7V5 | 34 | Preparing a Formal Business Plan | 7 | 16 | 2 |
| DV5J | 35 | Project Management: Managing the implementation of a project | 8 | 16 | 2 |
| F7J7 | 35 | Business Culture and Strategy | 8 | 16 | 2 |
| HT9W | 34 | Social Media | 7 | 8 | 1 |
| HT9P | 35 | Social Media for Business | 8 | 8 | 1 |
| HY94 | 35 | Financial Services Regulatory Framework* | 8 | 8 | 1 |

## Group 4 — Software and Systems (a minimum of 1 credit required)

| 4 code | 2 code | Unit title | SCQF level | SCQF credit points | SQA credit |
|--------|--------|-----------|-----------|-------------------|-----------|
| HT9H | 34 | Agile Development: Introductions | 7 | 8 | 1 |
| H17X | 34 | Software Development: Programming Foundations | 7 | 8 | 1 |
| HF4Y | 34 | Developing Mobile Web Based Applications: An Introduction | 7 | 16 | 2 |
| H17W | 34 | Software Development: Developing Small Scale Stand Alone Applications | 7 | 16 | 2 |
| DH3J | 34 | SQL: Introduction | 7 | 8 | 1 |
| HT9R | 34 | User Experience Design: Introduction | 7 | 8 | 1 |
| HA4C | 34 | Software Development: Analysis and Design (SCQF level 7) | 7 | 16 | 2 |
| HA4F | 34 | Software Development: Implementation and Testing (SCQF level 7) | 7 | 16 | 2 |
| HA4J | 34 | Software Development: Project (SCQF level 7) | 7 | 16 | 2 |
| H173 | 34 | Developing Software: Introduction | 7 | 8 | 1 |
| HF83 | 35 | E-Commerce Solutions | 8 | 8 | 1 |

**Optional units (cont) (a minimum of 4 credits)**

## Group 4 (cont)

| 4 code | 2 code | Unit title | SCQF level | SCQF credit points | SQA credit |
|---|---|---|---|---|---|
| H172 | 35 | Systems Development: Object Oriented Analysis and Design | 8 | 16 | 2 |
| H171 | 35 | Software Development: Object Oriented Programming | 8 | 16 | 2 |
| HA4D | 35 | Software Development: Analysis and Design (SCQF level 8) | 8 | 16 | 2 |
| HA4G | 35 | Software Development: Implementation and Testing (SCQF level 8) | 8 | 16 | 2 |
| HA4K | 35 | Software Development: Project (SCQF level 8) | 8 | 16 | 2 |

## Group 5 — Languages (No minimum requirement. Up to 2 credits)

| 4 code | 2 code | Unit title | SCQF level | SCQF credit points | SQA credit |
|---|---|---|---|---|---|
| F2F9 | 33 | Communication in French: Basic Operational Reading and Writing Skills | 6 | 8 | 1 |
| F20P | 33 | Communication in French: Basic Operational Speaking and Listening Skills | 6 | 8 | 1 |
| F2FB | 33 | Communication in German: Basic Operational Reading and Writing Skills | 6 | 8 | 1 |
| F20S | 33 | Communication in German: Basic Operational Speaking and Listening Skills | 6 | 8 | 1 |
| F2FC | 33 | Communication in Italian: Basic Operational Reading and Writing Skills | 6 | 8 | 1 |
| F20T | 33 | Communication in Italian: Basic Operational Speaking and Listening Skills | 6 | 8 | 1 |
| F2FE | 33 | Communication in Spanish: Basic Operational Reading and Writing Skills | 6 | 8 | 1 |
| F20W | 33 | Communication in Spanish: Basic Operational Speaking and Listening Skills | 6 | 8 | 1 |

## HND Technologies in Business

The HND award is made up of 30 SQA credits (240 SCQF points), of which 16 credits (128 SCQF points) are mandatory and 14 credits (112 SCQF points) are optional.

### Mandatory units (16 credits)

| 4 code | 2 code | Unit title | SCQF level | SCQF credit points | SQA credit |
|--------|--------|------------|------------|--------------------|-----------| 
| HT9K | 34 | Business Process Management: Introduction | 7 | 8 | 1 |
| H7TK | 34 | Communication: Business Communication | 7 | 8 | 1 |
| HT9V | 34 | Cyber Resilience | 7 | 8 | 1 |
| H1F7 | 34 | Professionalism and Ethics in Computing | 7 | 8 | 1 |
| DV6J | 34 | Functional Areas of Business | 7 | 8 | 1 |
| HT9N | 34 | Project Management Methodologies: Introduction | 7 | 8 | 1 |
| H8W8 | 34 | Big Data | 7 | 8 | 1 |
| HX4R | 34 | Technologies in Business: Graded Unit 1 (Exam) | 7 | 8 | 1 |
| F7J7 | 35 | Business Culture and Strategy | 8 | 16 | 2 |
| HT9J | 35 | Business Process Management | 8 | 16 | 2 |
| H16W | 35 | Relational Database Management Systems | 8 | 16 | 2 |
| HX4T | 35 | Technologies in Business: Graded Unit 2 (Project) | 8 | 16 | 2 |

## Optional units (a minimum of 14 credits)

A minimum of four credits must be achieved from the following table. Please note the minimum requirement for each group apart from the language units.

## Group 1 — Infrastructure (a minimum of 1 credit required, at least one unit at SCQF level 8)

| 4 code | 2 code | Unit title | SCQF level | SCQF credit points | SQA credit |
|--------|--------|-----------|------------|--------------------|-----------|
| HT9G | 34 | Network Security Concepts | 7 | 16 | 2 |
| HT9L | 34 | Computer Networking: Introduction for Business | 7 | 8 | 1 |
| HF85 | 34 | Emerging Technologies and Experiences | 7 | 8 | 1 |
| H179 | 34 | Cloud Computing | 7 | 8 | 1 |
| H17S | 34 | Network Concepts | 7 | 16 | 2 |
| HT9F | 35 | Database Server Administration | 8 | 16 | 2 |
| HT9M | 35 | Introduction to Mobile Device Management (MDM) and Mobile Application Management (MAM) | 8 | 8 | 1 |
| H17R | 35 | Mobile Technology | 8 | 8 | 1 |
| H8N5 | 35 | Private Cloud Virtualisation | 8 | 8 | 1 |

## Group 2 — IT/Computer Science (a minimum of 1 credit required, at least one unit at SCQF level 8)

| 4 code | 2 code | Unit title | SCQF level | SCQF credit points | SQA credit |
|--------|--------|-----------|------------|--------------------|-----------|
| H8XP | 33 | Mathematics for Science 1 | 6 | 8 | 1 |
| H8XT | 33 | Statistics for Science 1 | 6 | 8 | 1 |
| F84X | 34 | IT in Business: Databases | 7 | 8 | 1 |
| HH83 | 34 | IT in Business: Spreadsheets | 7 | 8 | 1 |
| HT9T | 34 | Artificial Intelligence | 7 | 8 | 1 |
| H8XV | 34 | Statistics for Science 2 | 7 | 8 | 1 |
| H7K1 | 34 | Engineering Mathematics 2 | 7 | 8 | 1 |
| J45X | 34* | Statistics for Business | 7 | 8 | 1 |
| H8W9 | 35 | Data Science | 8 | 16 | 2 |
| HH7V | 35 | Computer Systems and Organisation | 8 | 8 | 1 |

## Group 3 — Business (a minimum of 1 credit required, at least one unit at SCQF level 8)

| 4 code | 2 code | Unit title | SCQF level | SCQF credit points | SQA credit |
|---|---|---|---|---|---|
| F84M | 34 | Business Accounting | 7 | 16 | 2 |
| H7V6 | 34 | Developing Entrepreneurial Skills | 7 | 8 | 1 |
| HG1N | 34 | Digital Marketing: Fundamentals | 7 | 8 | 1 |
| HG1K | 34 | Professional Career Development in the IT Industry | 7 | 8 | 1 |
| HJ4W | 34 | Work Placement | 7 | 8 | 1 |
| H1F0 | 34 | Creating a Culture of Customer Care | 7 | 8 | 1 |
| H7V5 | 34 | Preparing a formal Business Plan | 7 | 16 | 2 |
| DV5J | 35 | Project Management: Managing the implementation of a project | 8 | 16 | 2 |
| HT9W | 34 | Social Media | 7 | 8 | 1 |
| HT9P | 35 | Social Media for Business | 8 | 8 | 1 |
| HY94 | 35* | Financial Services Regulatory Framework | 8 | 8 | 1 |

## Group 4 — Software and Systems (a minimum of 1 credit required, at least one unit at SCQF level 8)

| 4 code | 2 code | Unit title | SCQF level | SCQF credit points | SQA credit |
|---|---|---|---|---|---|
| HT9H | 34 | Agile Development: Introduction | 7 | 8 | 1 |
| H17X | 34 | Software Development: Programming Foundations | 7 | 8 | 1 |
| HF4Y | 34 | Developing Mobile Web Based Applications: An Introduction | 7 | 16 | 2 |
| H17W | 34 | Software Development: Developing Small Scale Stand Alone Applications | 7 | 16 | 2 |
| DH3J | 34 | SQL: Introduction | 7 | 8 | 1 |
| HT9R | 34 | User Experience Design: Introduction | 7 | 8 | 1 |
| HA4C | 34 | Software Development: Analysis and Design (SCQF level 7) | 7 | 16 | 2 |
| HA4F | 34 | Software Development: Implementation and Testing (SCQF level 7) | 7 | 16 | 2 |
| HA4J | 34 | Software Development: Project (SCQF level 7) | 7 | 16 | 2 |

## Group 4 — Software and Systems (a minimum of 1 credit required, at least one unit at SCQF level 8)

| 4 code | 2 code | Unit title | SCQF level | SCQF credit points | SQA credit |
|--------|--------|-----------|------------|---------------------|------------|
| H173 | 34 | Developing Software: Introduction | 7 | 8 | 1 |
| HF83 | 35 | E-Commerce Solutions | 8 | 8 | 1 |
| H172 | 35 | Systems Development: Object Oriented Analysis and Design | 8 | 16 | 2 |
| H171 | 35 | Software Development: Object Oriented Programming | 8 | 16 | 2 |
| HA4D | 35 | Software Development: Analysis and Design (SCQF level 8) | 8 | 16 | 2 |
| HA4G | 35 | Software Development: Implementation and Testing (SCQF level 8) | 8 | 16 | 2 |
| HA4K | 35 | Software Development: Project (SCQF level 8) | 8 | 16 | 2 |

## Group 5 — Languages (No minimum requirement. Up to 2 credits)

| 4 code | 2 code | Unit title | SCQF level | SCQF credit points | SQA credit |
|--------|--------|-----------|------------|---------------------|------------|
| F2F9 | 33 | Communication in French: Basic Operational Reading and Writing Skills | 6 | 8 | 1 |
| F20P | 33 | Communication in French: Basic Operational Speaking and Listening Skills | 6 | 8 | 1 |
| F2FB | 33 | Communication in German: Basic Operational Reading and Writing Skills | 6 | 8 | 1 |
| F20S | 33 | Communication in German: Basic Operational Speaking and Listening Skills | 6 | 8 | 1 |
| F2FC | 33 | Communication in Italian: Basic Operational Reading and Writing Skills | 6 | 8 | 1 |
| F20T | 33 | Communication in Italian: Basic Operational Speaking and Listening Skills | 6 | 8 | 1 |
| F2FE | 33 | Communication in Spanish: Basic Operational Reading and Writing Skills | 6 | 8 | 1 |
| F20W | 33 | Communication in Spanish: Basic Operational Speaking and Listening Skills | 6 | 8 | 1 |

# 3      Aims of the qualifications

The aim of the awards is to provide learners with the interpersonal, business and IT skills required to pursue a successful career in today's technology driven business world.

## 3.1     General aims of the qualifications

The general aims are:

1      to provide academic stimulus.
2      to develop study and research skills.
3      to develop Core Skills to the level required by employers.
4      to enable progression within the Scottish Credit and Qualifications Framework.
5      **(HND)** To provide a wide range of articulation routes.

## 3.2     Specific aims of the qualifications

The specific aims are:

6      to develop a balance of business, inter-personal, technology and project management skills.
7      to provide a flexible qualification with a wide range of specialist options.
8      to provide a qualification which reflect the needs of employers.
9      to provide a range of articulation routes.
10     **(HND)** To develop an industry recognised course.

## 3.3     Graded unit(s)

The QDT selected an examination as the SCQF level 7 graded unit for the HNC award. This option was chosen for the following reasons:

♦  QDT preference: The QDT supported the use of an exam based graded unit at HNC level (SCQF 7).
♦  HE articulation: The examination used for the HNC helps to prepare learners for a style of assessment commonly used in degree programmes.

The graded unit for the award is designed to provide evidence that the learner has achieved the following aims of the HNC Technologies in Business:

♦  to develop a balance of business, inter-personal, technology and project management skills.
♦  to develop study and research skills.
♦  to enable progression within the Scottish Credit and Qualifications Framework.
♦  to provide academic stimulus.

The QDT selected a project as the SCQF level 8 Graded Unit for the HND award. This option was chosen for the following reasons:

♦ QDT preference: The QDT supported the use of a project based graded unit at the HND level (SCQF 8).
♦ Stakeholder support: Heads of Computing supported the use of a project for the HND awards.
♦ HE articulation: a project facilitates progression to degree courses as it supports both scholarly activities and independent learning.

The graded unit for the award is designed to provide evidence that the learner has achieved the following aims of HND Technologies in Business:

♦ to provide academic stimulus.
♦ to develop study and research skills.
♦ to develop a balance of business, inter-personal, technology and project management skills.

# 4      Recommended entry to the qualifications

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:

♦ Two National Qualifications at Higher level (including at least one from Computing Science, Business Management, English or Mathematics) **and** three relevant National 5 qualifications or equivalent
♦ National Certificate in Computing with Digital Media at SCQF level 6
♦ Other appropriate National Certificates at SCQF level 6
♦ SVQ/CBQ at level 3 in a relevant area
♦ Different combinations of National Qualifications, Vocational Qualifications and equivalent qualifications from other awarding bodies
♦ Other equivalent qualifications or experience
  **Plus**
♦ Good communication and analytical skills
♦ For learners where English is not their first language, it is recommended that they possess English for Speakers of Other languages (ESOL) at SCQF level 5 or an overall score of 5.5 in IELTS

## 4.1    Entry to Year 2

Access to the second year of the HND award will vary dependent upon each centre but will normally require a minimum of 15 SQA credits including all of the mandatory units contained within the HNC Technologies in Business and relevant options.

## 4.2    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.

| Core Skill | HNC Recommended SCQF entry Profile | Associated assessment activities |
|---|---|---|
| Communication | 5 | The Core Skill of 'Communication' at SCQF level 6 can be developed naturally within the mandatory unit: Communication: Business Communication in which it is embedded. |
| Numeracy | 5 | The Core Skill of 'Numeracy' at SCQF level 6 can be developed in the delivery of the unit Big Data. This Core Skill is signposted rather than embedded. |
| Information and Communication Technology (ICT) | 5 | There are numerous opportunities to develop the Core Skill of 'ICT' at SCQF level 6. The Core Skill is signposted within the following units:<br>♦ Big Data<br>♦ Communication: Business Communication<br>♦ Cyber Resilience |
| Problem Solving | 5 | The 'Critical Thinking' component of the Core Skill Problem Solving' is embedded within the unit Developing Software: Introduction at SCQF level 6 and the remaining components are signposted within the following units:<br>♦ Business Process Management: Introduction<br>♦ Communication: Business Communication |
| Working with Others | 5 | The Core Skill of 'Working with Others' at SCQF level 6 can be developed naturally within the mandatory unit:<br>♦ Communication: Business Communication in which it is signposted. |

# 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

The aims of the awards are met within the mandatory units. The table below illustrates where the individual aims are met within each unit.

| Code | Unit title | Aims | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| HT9N 34 | Project Management Methodologies: Introduction | X | X | | X | X | X | X | X | X | X |
| DV6J 34 | Functional Areas of Business | X | X | X | X | X | X | X | X | X | X |
| HT9V 34 | Cyber Resilience | X | X | X | X | X | X | X | X | X | X |
| HX4R 34 | Technologies in Business: Graded Unit 1 | X | X | X | X | X | X | X | X | X | X |
| H1F7 34 | Professionalism and Ethics in Computing | X | X | X | X | X | X | X | X | X | X |
| HT9K 34 | Business Process Management: Introduction | X | X | X | X | X | X | X | X | X | X |
| H7TK 34 | Communication: Business Communication | X | X | X | X | X | X | X | X | X | X |
| H8W8 34 | Big Data | X | X | X | X | X | X | X | X | X | X |
| HT9J 35 | Business Process Management | X | X | X | X | X | X | X | X | | X |
| HX4T 35 | Technologies in Business: Graded Unit 2 | X | X | X | X | X | X | X | X | | X |
| H16W 35 | Relational Database Management Systems | X | X | X | X | X | X | X | X | | X |
| F7J7 35 | Business Culture and Strategy | X | X | X | X | X | X | X | X | | X |

## 5.2 Mapping of Core Skills development opportunities across the qualifications

The table below demonstrates whether the Core Skills components developed in each unit are:

**E —** **Embedded** which means learners who achieve the unit will automatically have their Core Skills profile updated on their certificate.

**S —** **Signposted** which means learners will be developing aspects of Core Skills through teaching and learning approaches but not enough to attract automatic certification.

*Subject to the Core Skills validation within SQA

| 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 |
| H8W8 34 | Big Data | | | S6 | S6 | S6 | S6 | | | | | |
| DV6J 34 | Functional Areas of Business | S6 | | | | | | S6 | | | | |
| HT9N 34* | Project Management Methodologies: Introduction | S6 | | | | | | | | | | |
| HT9K 34* | Business Process Management: Introduction | | | | | | | S6 | S6 | S6 | | |
| HT9J 35* | Business Process Management | | | | | | | S6 | S6 | S6 | | |
| H7TK 34 | Communication: Business Communication | E6 | E6 | | | S6 | S6 | S6 | S6 | S6 | S6 | S6 |
| H16W 35 | Relational Database Management Systems | | | | | S6 | S6 | S6 | S6 | S6 | | |
| H1F7 34 | Professionalism and Ethics in Computing | S6 | S6 | | | | | | | | | |
| HT9V 34 | Cyber Resilience | | | | | S6 | S6 | | | | | |
| F7J7 35 | Business Culture and Strategy | S6 | S6 | | | | | | | | | |

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

The National Occupational Standards for IT professionals are industry standards for skills, developed in collaboration with employers, professional bodies and others. They are continually updated for all key disciplines of the tech profession, and provide the building blocks for qualifications and training. The standards have been developed in line with the Skills Framework for the Information Age (SFIA).

The purpose of the standards is to:

♦ define the capabilities (performance, knowledge and understanding) required to operate as an IT professional.
♦ make it easier for employers to describe job roles, externally and internally.
♦ provide a standard taxonomy for recognising the skills levels of employees and setting development objectives.
♦ enable the benchmarking of degrees and training courses against employer needs
♦ help training providers and educators to develop courses that meet the needs of the tech sector.
♦ provide guidance to regulators when accrediting qualifications.

The IT Professional Standards are organised in eight disciplines for the profession. They are split by levels — from new entrants (level 3) to experienced technical leads/senior managers (level 6) — with a level 2 foundation level for some of the standards.

The eight disciplines categories are:

♦ Architecture, Analysis and Design
♦ Business Change Management
♦ Data Analytics
♦ Information Management
♦ Information Security
♦ IT Service Management and Delivery
♦ Networks
♦ Solution Development and Implementation

The three categories relevant to the HNC/HND Technologies in Business are:

♦ Data Analytics at level 3
♦ Solution Development and Implementation at level 3
♦ Business Change Management at level 3

| Code | Unit title | National Occupational Standard | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ESKITP8013.01 | ESKITP8023.01 | ESKITP8033.01 | ESKITP5023 | ESKITP5033 | ESKITP5043 | ESKITP5053 | ESKITP5063 | TECIT50731 | ESKITP5013 | ESKITP2023.01 | ESKITP2013.01 | ESKITP2033.01 |
| HT9N 34 | Project Management Method-ologies: Introduction | | | | | | | | | | | | | X |
| DV6J 34 | Functional Areas of Business | | | | | | | | | | | | X | |
| HX4R 34 | Graded Unit 1 | | | | | | | | | | | | | |
| HT9K 34 | Business Process Management: Introduction | | | | | | | | | | | X | | |
| H8W8 34 | Big Data | X | X | X | | | | | | | | | | |
| HT9J 35 | Business Process Management | | | | | | | | | | | X | | |
| H1F7 34 | Profession-alism and Ethics in Computing | X | X | X | | | | | | | | | | |
| HX4T 35 | Graded Unit 2 | | | | X | X | | X | X | X | X | X | X | |
| H16W 35 | Relational Database Management Systems | | | | | | | | | | X | | | |
| HT9V 34 | Cyber Resilience | X | X | X | | | | | | | | | | |
| H7TK 34 | Communi-cation: Business Communi-cation | X | X | X | | | | | | | | | | |

## 5.4 Assessment strategy for the qualifications

The units listed below are the mandatory units within the HNC and HND Technologies in Business. The following are the recommended assessment methods for each unit, bearing in mind that there may be more than one assessment in a unit.

| Unit | Assessment | | | |
|---|---|---|---|---|
| | **Outcome 1** | **Outcome 2** | **Outcome 3** | **Outcome 4** |
| Big Data | Open-book assessment. The evidence of cognitive competence can be assessed by written submission covering the definitions, descriptions and explanations of Big Data. | | | Open-book assessment. The evidence of practical competence will be the application of big data techniques to a specific problem. |
| Functional Areas of Business | Open–book assessment.<br>The unit can be assessed using a case study of a hypothetical or an actual organisation. Learners can be asked to provide a report on the functional areas of the organisation by responding to a brief based on the evidence requirements. | | | |
| Project Management Methodologies: Introduction | Open-book assessment. The knowledge and understanding elements of the unit can be assessed via an open-book written report. | Open-book assessment. Practical skills can be assessed by a project planning task. | | |

| Unit | Assessment | | | |
|---|---|---|---|---|
| | **Outcome 1** | **Outcome 2** | **Outcome 3** | **Outcome 4** |
| Business Process Management: Introduction | Closed-book assessment. Written submission covering the definitions, descriptions and explanations required for Outcomes 1 and 2. | | Open-book assessment. Practical assignment involving the creation of business process diagrams using an appropriate tool to analyse and document a simple business scenario. | |
| Business Process Management | Open-book assessment. A single practical assignment involving the analysis and modelling of a real life business process can be used to cover all the learning outcomes. | | | |
| Cyber Resilience | SAQ closed-book assessment covering knowledge and understanding for all outcomes.<br><br>Practical assignment covering performance evidence (all outcomes) which would require learners to protect digital devices, maintain network security in routine and non-routine conditions (when network is under attack) and respond appropriately to cyber attacks. | | | |

| Unit | Assessment | | | |
|---|---|---|---|---|
| | Outcome 1 | Outcome 2 | Outcome 3 | Outcome 4 |
| Professionalism and Ethics in Computing | Open–book assessment.<br><br>The unit can be assessed via a written report based on a case study/scenario of a realistic computing environment. (All outcomes). | | | |
| Communication: Business Communication | An extended case study or project could provide a context for integrating work in responses to and production of communication media. As an example, Outcome 1 assessment could proceed after a review of literature on contemporary business issues.<br><br>A pitch taking pioneering ideas to market (Outcome 3) could be supported by a written report presenting key information, supporting detail and conclusions/solutions or recommendations (Outcome 2). | | | |
| Relational Database Management Systems | Closed-book assessment (Outcome 1) Learners will need to provide evidence to demonstrate their knowledge of the concepts involved in designing a Relational Database Management System. Open-book assessment (Outcomes 2–4) Learners will need to provide evidence of their knowledge and skills by demonstrating they can design, create and interrogate a Relational Database Management System. | | | |
| Business Culture and Strategy | 3,500 word report based on a case study of an organisation. Report covers all outcomes. | | | |
| Graded Unit 1 (Examination) | Closed-book Assessment. Three hour graded examination based on the following units:<br><br>HT9K 34    Business Process Management: Introduction<br><br>H1F7 34    Professionalism and Ethics in Computing<br><br>DV6J 34    Functional Areas of Business<br><br>HT9N 34    Project Management Methodologies: Introduction | | | |
| Graded Unit 2 (Project) | Open-book assessment. Practical assignment. The learner will be required to provide documentation which supports evidence of the learner'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. | | | |

# 6 Guidance on approaches to delivery and assessment

## 6.1 Sequencing/integration of units

Providing the mandatory units of the award are covered, centres are free to devise their own sequence for delivery of units. It is recommended however that SCQF level 7 units are concentrated in Year 1 with SCQF level 8 units concentrated in Year 2.

Where possible, learners should complete a SCQF level 7 feeder unit before undertaking associated SCQF level 8 unit(s). Examples in the course schedule below are as follows:

| SCQF level 7 Feeder unit(s) | SCQF level 8 unit |
|---|---|
| Big Data (H8W8 34) | Data Science (H8W9 35) |
| Business Process Management: Introduction (HT9K 34) | Business Process Management (HT9J 35) |
| Functional Areas of Business (DV6J 34) | Business Culture and Strategy (F7J7 35) |

It is recommended that where possible assessments should be integrated to reduce the assessment load.

In selecting combinations of optional units centres are also likely to consider issues such as:

♦ Articulation arrangements with universities
♦ Needs of employers
♦ Resources available to the centre

An example course schedule plan is suggested below based on a three teaching block academic year for **the HNC award**.

In the first block of the schedule learners are introduced to a broad range of introductory business and technology subjects. The follow on blocks continue this theme and includes an in depth treatment of data analysis within the *Data Science* unit as this is a key driver of business analytics.

Note that centres are free to devise their own alternative course plans.

| HNC Technologies in Business | | |
|---|---|---|
| **Block 1** | **Block 2** | **Block 3** |
| Big Data (H8W8 34) 1 credit level 7 | Statistics for Business (F84K 35) 1 credit level 8 | HNC Technologies in Business: Graded Unit 1: Exam (HX4R 34) 1 credit level 7 |
| Digital Marketing: Fundamentals (HG1N 34) 1 credit level 7 | Data Science (H8W9 35) 2 credits level 8 | |
| Functional Areas of Business (DV6J 34) 1 credit level 7 | Communication: Business Communication (H7TK 34) 1 credit level 7 | Emerging Technologies and Experiences (HF85 34) 1 credit level 7 |
| | Business Process Management: Introduction (HX4T 34) 1 credit level 7 | |
| Project Management Methodologies: Introduction (HT9N 34) 1 credit level 7 | | Cyber Resilience (HT9V 34) 1 credit level 7 |

An example course schedule plan is suggested below, based upon a two year course with each year comprising of three blocks for **the HND award**. The particular schedule shown has a strong software development theme, however as previously stated this is one of a number of potential themes.

In the first year of the schedule learners are introduced to a broad range of introductory business and technology subjects. In the second year the focus narrows and Business specific specialisms are developed in the *Business Process Management* unit and the *Business Culture and Strategy* unit.

There is significant scope for centres to develop a number of themes built on these core units specialising in the optional areas of the award, namely, infrastructure and its management, computing science, business and software development.

Note that centres are free to devise their own alternative course plans.

| HND Technologies in Business — Year 1 | | |
|---|---|---|
| **Block 1** | **Block 2** | **Block 3** |
| Developing Software: Introduction (H173 34) 1 credit level 7 | Software Development: Programming Foundations (H17X 34) 1 credit level 7 | HNC Technologies in Business: Graded Unit 1: Exam (HX4R 34) 1 credit level 7 |
| Computer Networking: Introduction for Business (HT9L W 34) 1 credit level 7 | IT in Business: Spreadsheets (HH83 34) 1 credit level 7 | Big Data (H8W8 34) 1 credit level 7 |
| Functional Areas of Business (DV6J 34) 1 credit level 7 | Communication: Business Communication (H7TK 34) 1 credit level 7 | Emerging Technologies and Experiences (HF85 34) 1 credit level 7 |
| Social Media (HT9W 34) 1 credit level 7 | Business Process Management: Introduction (HT9K 34) 1 credit level 7 | Developing Entrepreneurial Skills (H7V6 34) 1 credit level 7 |
| Project Management Methodologies: Introduction (HT9N 34) 1 credit level 7 | Professionalism and Ethics in Computing (H1F7 34) 1 credit level 7 | Cyber Resilience (HT9V 34) 1 credit level 7 |

| HND Technologies in Business — Year 2 | | |
|---|---|---|
| **Block 1** | **Block 2** | **Block 3** |
| Statistics for Business (J45X 34) 1 credit level 7 | Software Development: Object Oriented Programming (H171 35) 2 credits Level 8 | |
| Systems Development: Object Oriented Analysis and Design (H172 35) 2 credits level 8 | | |
| Business Culture and Strategy (F84K 35) 2 credits level 8 | Data Science (H8W9 35) 2 credits level 8 | |
| Business Process Management (HT9J 35) 2 credits level 8 | | HND Technologies in Business: Graded Unit 2 (HX4T 35)2 credits level 8 |
| Relational Database Management Systems (H16W 35) 2 credits level 8 | | Digital Marketing: Fundamentals (HG1N 34) 1 credit level 7 |

## 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 HNC award will allow progression to the second year of the related HND award.

The table below shows some examples of potential degree articulation paths.

| HE Institution | Degree(s) | Level |
|---|---|---|
| Napier University | Business Information Systems — BSc/BSc (Hons) | 2 |
| GCU | BSc (Hons) IT Management for Business | 1 |
| Aberdeen University | BSc Business Management and Information Systems | TBA |
| UWS | BSc (Hons) Business Technology | 2 |
| Strathclyde University | BA Business Analysis and Technology | TBA |
| Stirling University | BSc (Hons) Business Computing | 1 |
| Dundee University | BSc (Hons) Business Management | 1 |

*There are currently no formal articulation agreements for the above courses. Appropriate options must be chosen to match relevant course.

## 6.3 Opportunities for e-assessment

The units in this award offer numerous opportunities for e-assessment ranging from objective question based closed-book assessments to the use of e- portfolios and video for some of the open-book assessments. It is also possible to use social media software to record and facilitate group work where appropriate. Each unit specification includes suggestions of how e-assessments might be used effectively.

## 6.4 Support materials

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

## 6.5 Resource requirements

As indicted by the award title, learners shall be introduced to a range of technologies and associated environments. This will require the use of contemporary system and software development environments and project management tools. Given the hybrid nature of the award delivery will span business and technology disciplines and appropriate staff development should be identified as required.

Given the current trend towards hybrid and cloud based vendor offerings it is envisaged that centres will have a mixed CAPEX/OPEX funding model to support environments being utilised.

# 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:

♦ learners 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.

**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 learners 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 learners 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 Units**: F84K 35 Statistics for Business (finish date 31/07/2022 has been replaced by J45X 34 Statistics for Business (start date 01/08/2019) for both frameworks | 06/04/20 |
| 02 | **Revision of Unit:** H0BW 35 Financial Services Regulatory Framework (Finish date 31/07/2018) has been replaced by HY94 35 Financial Services Regulatory Framework (start date 01/08/2018) | 24/04/18 |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

# 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.

Over the last 15 years, the IT industry has undergone a transformation as technology has permeated all areas of business. In most organisations IT has changed from a support department installing and troubleshooting systems to a key enabler of business strategy and competitiveness, applying digital solutions to business problems.

The HNC/HND Technologies in Business awards are hybrid qualifications designed to address the business need for multi skilled individuals possessing the IT, business and inter-personal skills required for the 21st century digital economy.

The course has been structured to provide you with a background in business operations, technology, project management and entrepreneurship to allow you to seek employment in a wide variety of sectors.

In the first year of the schedule you are introduced to a broad range of introductory business and technology subjects. In the second year the focus narrows and specialisms are developed in the two main themes of software development and supporting business related units such as *Business Process Management*.

Your centre will choose appropriate options for your course which will allow you to specialise in a number of fields including business, technology management, and business information systems.

On successfully completion of the HNC course you can articulate to the second year of the HND Technologies in Business. On successfully completion of the HND course you can further expand your employment opportunities by progressing on to a range of related degree courses.