



**Arrangements for:  
HNC Dental Technology  
Group Award Code G8W1 15**

**Validation date: June 2007**

**HND Dental Technology  
Group Award Code: G96M 16**

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## **Acknowledgement**

SQA acknowledges the valuable contribution that Scotland's colleges have made to the development of Higher National qualifications.

## 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.

Version number	Description	Date
03	<b>Revision of Unit:</b> DK2K 34 Getting Started in Business has been revised by H7V4 34 Preparing to Start a Business and will finish on 31/07/2016.	12/01/15
02	F3G7 35 removed from mandatory Unit list. F3G8 35 inserted and credit points amended appropriately.	22/04/09

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# 1 Introduction

This is the Arrangements Document for the revised Group Awards of HNC and HND Dental Technology, which were validated in June 2007 and November 2008 respectively. This document includes: background information on the development of the Group Awards, their aims, guidance on access, details of the Group Awards structures, and guidance on delivery.

These revised awards will replace the current HNC and HND in Dental Technology which were introduced in 1990.

The revised awards are designed to equip candidates with the knowledge, understanding and skills required for success in current and future employment or for progression to further academic qualifications.

## 2 Rationale for the revision of the awards

The predecessor Group Awards in Dental Technology have proved very successful in producing dental technology candidates with the relevant qualifications and training to enable them to successfully gain employment in the Dental Technology profession.

These predecessor awards were used to gain voluntary registration with the Dental Technicians Education and Training Advisory Board (DTETAB). However, from 2008 all dental technicians have to be trained, qualified and registered with the General Dental Council (GDC) to practice in the UK. The revised awards have been designed to meet the criteria set down by the GDC for registerable qualifications and SQA's HN Design Principles. The HNC award has provisional approval from the General Dental Council as the recognised qualification to register with them. The HND award is a post GDC registration course. The GDC Criteria for Dental Technicians (Parts 2A and 2B) are given in Appendix 1.

### 2.1 Market research, consultation and development processes

A Qualification Design Team (QDT) was set up to oversee the review and development of the revised qualifications. Extensive consultation was carried out at all stages of the review process to ascertain the relevance of the proposed frameworks and content of individual Units.

Stakeholder	Method of consultation
Delivering centres	<ul style="list-style-type: none"><li>◆ Postal survey</li><li>◆ Postal/electronic questionnaire</li></ul>
British Dental Laboratories Association	<ul style="list-style-type: none"><li>◆ Postal survey</li><li>◆ Postal/electronic questionnaire</li><li>◆ Face-to-face meeting</li></ul>
Chief Dental Technicians from NHS Trust hospitals	<ul style="list-style-type: none"><li>◆ Postal survey</li><li>◆ Postal/electronic questionnaire</li></ul>
Owners and proprietors of commercial Dental Laboratories	<ul style="list-style-type: none"><li>◆ Postal survey</li><li>◆ Postal/electronic questionnaire</li></ul>

Stakeholder	Method of consultation
Current/former candidates	<ul style="list-style-type: none"> <li>◆ Postal survey</li> <li>◆ Postal/electronic questionnaire</li> </ul>

## 2.2 Summary of feedback

The feedback confirmed the usefulness of the existing awards. It also confirmed that:

- ◆ the awards needed to be revised to satisfy the GDC registration requirements and therefore make them relevant to employers
- ◆ the subject, content and wording of Units needed updating to reflect current developments within dental technology:
  - technical procedures made less specific and more generic
  - allow the progression of advanced technologies
  - incorporation of pressure formed appliances
  - incorporation of a custom taped post
- ◆ the use of continuous assessment throughout the awards for practical exercises did not adequately prepare candidates to cope under the pressure they were likely to encounter working in a production laboratory
- ◆ the use of a Graded Unit to assess candidates on their practical skill performance under controlled conditions would be similar to that of the technician working to deadlines within the laboratory
- ◆ there should be consistency of approach towards assessment across all mandatory and optional Units
- ◆ the importance of the development of Core Skills and transferable skills to meet the needs of employers, eg:
  - ability to respond orally and in writing to technical information
  - produce computer based reports
  - review and evaluation of practical incoming and outgoing work in according with best practice
  - liaise with patients, clinicians, colleagues and other Dental Care professionals
  - prioritise and manage workload on a day-to-day basis

## 3 Aims of the awards

The HNC award is designed to give candidates a breadth of knowledge in all areas of dental technology and to be able to demonstrate technical competence.

The HND award is designed to give candidates a breadth of knowledge in all areas and advanced knowledge in one specialism, combined with the transferable skills and knowledge relevant to their programme level, required by employers.

### 3.1 General aims of both awards

- 1 To develop professional attitudes and high ethical standards in relation to patient treatment and the need for continuing professional development.
- 2 To effectively develop communication and interpersonal skills with other Dental Care Professionals (DCPs) and, when necessary, patients.
- 3 To develop logical, analytical and problem-solving skills within the dental laboratory.
- 4 To ensure that candidates have the standard of knowledge and competence that will enable them to function as modern dental technicians in a progressive oral health care team.
- 5 Enable candidates to acquire a range of related knowledge and experience thus enhancing skills of versatility and adaptability.
- 6 To develop transferable skills including Core Skills that will allow candidates to function more effectively in the work place.
- 7 Develop organisational and time-management skills.
- 8 Develop study and research skills.
- 9 Enhance or develop the use of contemporary methods of electronic communication and information management.
- 10 Enhance employment prospects.
- 11 Facilitate progression within the SCQF.

*in addition the HNC will:*

- 12 Provide a qualification that satisfies the registration requirements of the GDC.

### 3.2 Specific aims of the award

#### **HNC Dental Technology**

The specific aims of the HNC award are to enable candidates to:

- 1 Enter the dental technology profession as a registered dental technician with the GDC.
- 2 Develop core competencies to enhance a career in dental technology and become a registered dental technician.
- 3 Effectively meet the requirements of employers.
- 4 Understand and apply basic core procedures and practices related to the laboratory environment.
- 5 Interpret and implement dental prescriptions.
- 6 Use a wide range of basic dental techniques.
- 7 Organise and implement laboratory procedures.
- 8 Organise and utilise specialist dental laboratory equipment.
- 9 Understand the principles and applications of basic related theory.
- 10 Produce various types of basic dental prosthesis and appliances.
- 11 Use a wide range of dental products effectively.
- 12 Understand the key, ethical, medico-legal considerations, and health and safety legislation involved in a dental laboratory.
- 13 Dealing with medical emergencies, and the maintenance of a safe working environment.
- 14 Provide a measure of candidates' abilities which will allow progression to HN

## **HND Dental Technology**

The specific aims of the HND award are to enable candidates to:

- 15 Develop core and specialist competencies to enhance a career in dental technology and become a registered dental technician.
- 16 Effectively meet the requirements of employers.
- 17 Improve the opportunities for diplomates to gain promoted posts within their current employment.
- 18 Undertake supervisory and management roles relevant to employment at senior or chief levels.
- 19 Allow the diplomate to develop skills to enable them to start their own dental technology business.
- 20 Organise and implement laboratory procedures
- 21 Understand and apply core, complex and advanced procedures and practices related to the laboratory environment.
- 22 Interpret and implement dental prescriptions of an advanced nature.
- 23 Use an extensive range of advanced dental techniques.
- 24 Develop and apply a range of vocational knowledge and skills in an integrated manner to the organisation of dental laboratory procedures.
- 25 Effectively organise and utilise specialist dental laboratory equipment and dental products to produce various types of advanced level dental prosthesis and appliances
- 26 Understand the principles and applications of related advanced theory.
- 27 Build on previously acquired transferable skills that enable adjustment to novel situations and new developments.
- 28 Produce and present a business plan and marketing strategy.
- 29 Understand the key, ethical, medico-legal considerations, and health and safety legislation involved in a dental laboratory.
- 30 Deal with medical emergencies, and the maintenance of a safe working environment.
- 31 Provide a measure of candidates' abilities which will allow progression to higher professional qualifications.

### **3.3 Target groups**

These are specialist awards designed for the dental technology sector. They are aimed at candidates who wish to further their career in dental technology or broaden their skill range to ensure that they have the standard of knowledge and technical competence to enable them to work as modern dental technicians within a progressive oral health care team, gain a recognised qualification for registration with the GDC or further their career in dental technology. The target groups include:

- ◆ Candidate/apprentice dental technicians in relevant employment
- ◆ Candidates who have completed locally devised programmes of NQ Units for Dental Technology and wish to gain a recognized qualification at a higher level and facilitate their progression to employment
- ◆ Previously qualified technicians in relevant employment who wish to update their skills, qualifications and facilitate progression to HND/higher education programmes
- ◆ Unqualified technicians who wish to gain a qualification to enable them to become eligible for registration



### **3.4 Employment opportunities**

Candidates may gain employment as dental technicians, senior technicians, dental laboratory managers, dental laboratory business owners and industry trade representatives. Employment opportunities will arise in:

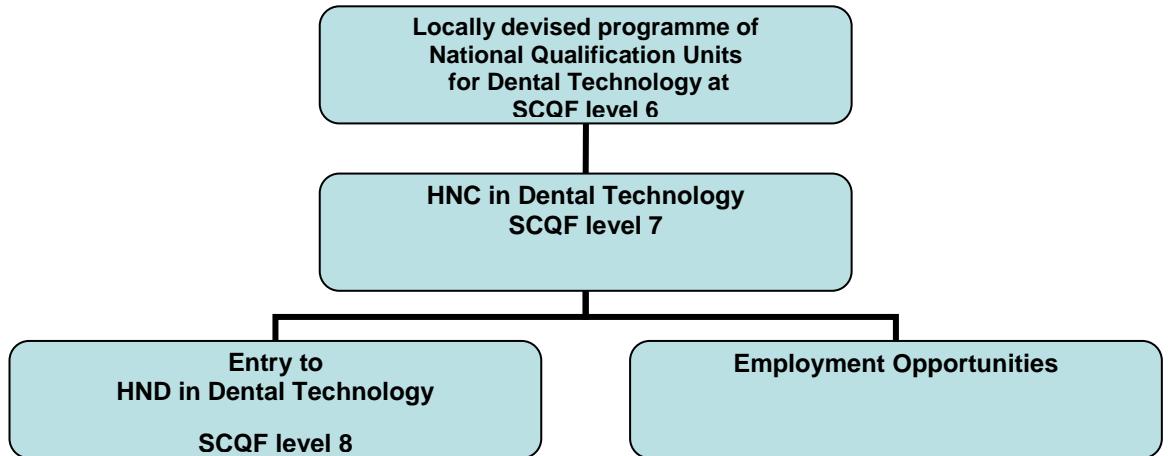
- ◆ The NHS Sector
- ◆ General practice laboratories
- ◆ Commercial laboratories

Candidates could be employed within specific areas, eg prosthodontics, orthodontics, crown and bridge, sales or education.

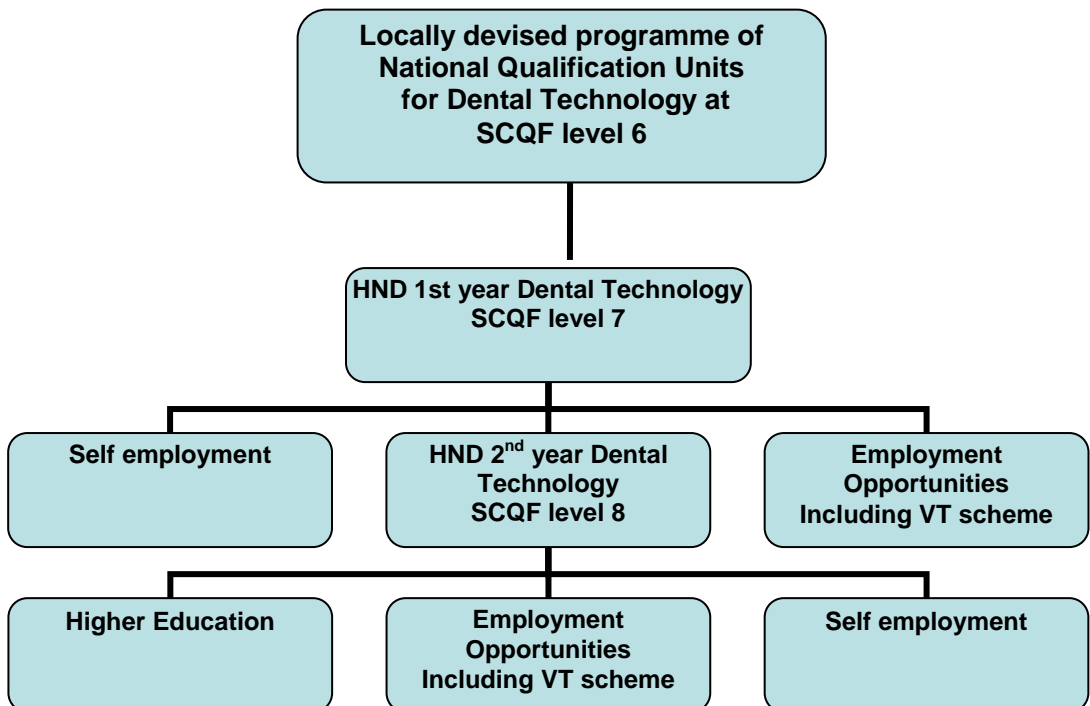
### 3.5 Progression

The diagrams below show possible progression routes for successful HNC and HND candidates.

#### HNC Dental Technology



#### HND Dental Technology



## **4 Access to awards**

As with all SQA qualifications, access to the awards will be at the discretion of the centre. The following recommendations are for guidance only.

### **4.1 Formal qualifications for HNC/1st year HND**

Examples of appropriate formal entry qualifications are specified below. They are not exhaustive or mutually exclusive and may be offered in a variety of combinations.

- ◆ Locally devised programme of NQ Units for Dental Technology (or equivalent) at SCQF level 6
- ◆ Equivalent awards from other awarding bodies
- ◆ Candidates from previous years, who have not completed their qualification, may be assessed individually and where appropriate, transition credit transfer arrangements may be used

### **4.2 Entry to Year 2 HND**

In order to achieve the HND Dental Technology candidates must gain 30 SQA credits. Ideally full-time candidates should be encouraged to achieve 15 credits in each year of the award. Wider access should be provided to cater for the needs of those, for example, who have achieved the HNC at day release or evening classes or in other colleges. Candidates would therefore be expected to have a minimum of 12 credits on entry to year 2 and these would include the HNC Dental Technology mandatory Units.

### **4.3 Work experience**

Candidates with suitable relevant work experience may be accepted for entry provided the enrolling centre believes that the candidate is likely to benefit from undertaking the award.

### **4.4 English as an additional language**

For candidates where English is not their first language it is recommended that they possess English for Speakers of Other Languages (ESOL) level 5 or a score of 5.5 in International English Language Testing System (IELTS).

### **4.5 Core Skills**

Recommended Core Skills entry and exit profiles are given in Section 5.1.

### **4.6 Accreditation of Prior Learning (APL)**

Where appropriate, centres may wish to consider Accreditation of Prior Learning (APL) and/or Accreditation of Prior Experiential Learning (APEL).

## 5 Award structure

Both awards have been designed in accordance with SQA's design principles for HN Awards.

- ◆ HNC shall be designed to be at SCQF level 7 and shall comprise 96 SCQF credit points with at least 48 credit points at SCQF level 7. This should include a mandatory section of at least 48 SCQF credit points and include one Graded Unit of 8 SCQF credit points at SCQF level 7.
- ◆ HNDs shall be designed to be at SCQF level 8 and shall comprise 240 SCQF credit points with at least 64 SCQF credit points at SCQF level 8. This should include a mandatory section of at least 96 SCQF credit points and include one Graded Unit of 8 SCQF credit points at SCQF level 7, plus Graded Unit(s) of 16 SCQF credit points at SCQF level 8.

### 5.1 Framework

#### HNC Dental Technology — 12 credits required

Unit title	Code	SCQF credit points	SCQF level	SQA credit value
Dental Technology: Professional Responsibilities	F1ME 34	12	7	1.5
Dental Oral and Facial Anatomy	F1M9 34	12	7	1.5
Dental Biomaterials	F1M6 34	8	7	1
Dental Alloy Techniques	F1M5 34	8	7	1
Dental Removable Prosthodontics: Partial Dentures	F1MD 34	8	7	1
Dental Removable Prosthodontics: Complete Dentures	F1MC 34	8	7	1
Dental Fixed Prosthodontics:	F1M7 34	8	7	1
Dental Fixed Prosthodontics: Bonded Restorations	F1M8 34	8	7	1
Dental Orthodontic Technology	F1MB 34	8	7	1
Dental Orthodontic Technology: Removable Appliances	F1MA 34	8	7	1
Dental Technology: Graded Unit 1	F33L 34	8	7	1
<b>Total credits</b>				<b>12</b>

## HND Dental Technology

30 credits required (23 mandatory + 7 from a cluster set)

Unit title	Code	SCQF credit points	SCQF level	SQA credit value
<b>Mandatory Units:</b>				
Dental Technology: Professional Responsibilities	F1ME 34	12	7	1.5
Dental Oral and Facial Anatomy	F1M9 34	12	7	1.5
Dental Biomaterials	F1M6 34	8	7	1
Dental Alloy Techniques	F1M5 34	8	7	1
Dental Removable Prosthodontics: Partial Dentures	F1MD 34	8	7	1
Dental Removable Prosthodontics: Complete Dentures	F1MC 34	8	7	1
Dental Fixed Prosthodontics:	F1M7 34	8	7	1
Dental Fixed Prosthodontics: Bonded Restorations	F1M8 34	8	7	1
Dental Orthodontic Technology	F1MB 34	8	7	1
Dental Orthodontic Technology: Removable Appliances	F1MA 34	8	7	1
Dental Removable Prosthodontics: Complex Complete Dentures	F3G8 35	16	8	2
Dental Fixed Prosthodontics: Bridgework	F43K 35	16	8	2
Dental Orthodontics: Complex Removable Appliances	F43P 35	16	8	2
Preparing to Start a Business*	H7V4 34*	8	7	1
Developing the Individual within a Team	DF45 34	8	7	1
Dental Technology: Graded Unit 1	F33L 34	8	7	1
Dental Technology: Graded Unit 2	F57G 35	16	8	2
<b>Mandatory optional Unit — one from:</b>				
Information Technology Application Software 1	D75X 34	8	7	1
Digital Imaging	DV60 34	8	7	1
<b>Total mandatory credits</b>				<b>23</b>

<b>One Cluster Set of Units to be chosen from:</b>				
<b>Cluster Set 1: Dental Removable Prosthodontics</b>				
Dental Removable Prosthodontics: Complex Partial Dentures	F43T 35	16	8	2
Dental Removable Prosthodontics: Implants	F3G9 35	16	8	2
Dental Removable Prosthodontics: Overdentures, Obturators and Precision Attachments	F3G7 35	24	8	3

Unit title	Code	SCQF credit points	SCQF level	SQA credit value
<b>Cluster Set 2: Dental Fixed Prosthodontics</b>				
Dental Fixed Prosthodontics: Precision Attachments	F43M 35	16	8	2
Dental Fixed Prosthodontics: Veneers and Inlays	F43N 35	16	8	2
Dental Fixed Prosthodontics: Implants	F43L 35	24	8	3

<b>Cluster Set 3: Dental Orthodontics</b>				
Dental Orthodontics: Fixed Appliance Therapy	F43R 35	16	8	2
Dental Orthodontics: Functional Appliances	F3G6 35	16	8	2
Dental Orthodontics: Malocclusion	F43S 35	24	8	3
<b>Total credits</b>				<b>30</b>

### 5.1.1 Graded Units

The purpose of the Graded Units is to:

- ◆ assess the candidate's ability to integrate and apply the knowledge and/or skills gained in the individual Units
- ◆ demonstrate that they have achieved the principal aims of the Group Award
- ◆ grade the candidate's achievement

The Graded Unit(s) will be assessed and a grade of A, B or C will be awarded to each of the Graded Units.

Candidates will undertake a one credit HN Graded Unit (8 SCQF credit points) at level 7 in HNC award. In the HND award candidates will undertake a one credit HN Graded Unit (8 SCQF credit points) at level 7 in the first year and a two credit HN Graded Unit (16 SCQF credit points) at level 8 in the second year.

Both Graded Units are project-based Units. This type of Graded Unit will enable candidates' practical skills to be assessed under controlled conditions. The design of the Graded Units reflects what is expected of candidates in this occupational area. Candidates will integrate the competencies gained in the mandatory Units by producing dental appliances from cast/model stage to completed prosthesis.

### 5.1.2 Core Skills Entry level

The recommended Core Skills entry and exit profiles for HNC/1st year HND are:

<b>Core Skill</b>	<b>Recommended Entry profile</b>	<b>Exit profile</b>
Communication	SCQF level 5	SCQF level 6
Numeracy	SCQF level 4	SCQF level 5
Information Technology	SCQF level 5	SCQF level 6
Problem Solving	SCQF level 5	SCQF level 6
Working with Others	SCQF level 5	SCQF level 6

The recommended Core Skills entry and exit profiles for 2nd year HND are:

<b>Core Skill</b>	<b>2nd Year Entry profile</b>	<b>HND Exit profile</b>
Communication	SCQF level 6	SCQF level 6
Numeracy	SCQF level 5	SCQF level 5
Information Technology	SCQF level 6	SCQF level 6
Problem Solving	SCQF level 6	SCQF level 6
Working with Others	SCQF level 6	SCQF level 6

A Core Skills signposting guide is given in Appendix 2 for all Units within the HNC/HND Dental Technology. Details of Core Skill Development within the HNC/1st year HND Units is given in Appendix 3.

## 5.2 Mapping information

The following table identifies how the specific aims of the awards are met by the individual Units.

### HNC Dental Technology

Unit code	Unit title	Aims
F1ME 34	Dental Technology: Professional Responsibilities	1, 2, 3, 4, 9, 12, 13
F1M9 34	Dental Oral and Facial Anatomy	1, 2, 3, 4, 9, 14
F1M6 34	Dental Biomaterials	1, 2, 3, 4, 9, 13, 14
F1M5 34	Dental Alloy Techniques	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 14
F1MD 34	Dental Removable Prosthodontics: Partial Dentures	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 14
F1MC 34	Dental Removable Prosthodontics: Complete Dentures	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 14
F1M7 34	Dental Fixed Prosthodontics	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 14
F1M8 34	Dental Fixed Prosthodontics: Bonded Restorations	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 14
F1MB 34	Dental Orthodontic Technology	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 14
F1MA 34	Dental Orthodontic Technology: Removable Appliances	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 14
F33L 34	Dental Technology: Graded Unit 1	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 14



## HND Dental Technology

Unit code	Unit title	General aims	Specific aims
F1ME 34	Dental Technology: Professional Responsibilities	1, 2, 4, 5, 6, 8, 10	13, 14, 15, 16, 17, 25, 27, 28, 29
F1M9 34	Dental Oral and Facial Anatomy	1, 2, 4, 5, 6, 8, 10	13, 14, 15, 16, 17, 25, 29
F1M6 34	Dental Biomaterials	1, 2, 4, 5, 6, 8, 10	13, 14, 15, 16, 17, 25, 28, 29
F1M5 34	Dental Alloy Techniques	1, 2, 3, 4, 5, 6, 8, 10	13, 14, 15, 16, 17, 18, 19, 25, 29
F1MD 34	Dental Removable Prosthodontics: Partial Dentures	1, 2, 3, 4, 5, 6, 8, 10	13, 14, 15, 16, 17, 18, 19, 25, 29
F1MC 34	Dental Removable Prosthodontics: Complete Dentures	1, 2, 3, 4, 5, 6, 8, 10	13, 14, 15, 16, 17, 18, 19, 25, 29
F1M7 34	Dental Fixed Prosthodontics:	1, 2, 3, 4, 5, 6, 8, 10	13, 14, 15, 16, 17, 18, 19, 25, 29
F1M8 34	Dental Fixed Prosthodontics: Bonded Restorations	1, 2, 3, 4, 5, 6, 8, 10	13, 14, 15, 16, 17, 18, 19, 25, 29
F1MB 34	Dental Orthodontic Technology	1, 2, 3, 4, 5, 6, 8, 10	13, 14, 15, 16, 17, 18, 19, 25, 29
F1MA 34	Dental Orthodontic Technology: Removable Appliances	1, 2, 3, 4, 5, 6, 8, 10	13, 14, 15, 16, 17, 18, 19, 25, 29, 29
F3G7 35	Dental Removable Prosthodontics: Over-dentures, Oburators and Precision Attachments	1, 2, 3, 4, 5, 6, 8, 10	13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 29
F43K 35	Dental Fixed Prosthodontics: Bridgework	1, 2, 3, 4, 5, 6, 8, 10	13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 29
F43P 35	Dental Orthodontics: Complex Removable Appliances	1, 2, 3, 4, 5, 6, 8, 10	13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 29
DK2K 34	Getting Started in Business	4, 5, 10	13, 14, 15, 16, 17, 25, 26, 29
DF45 34	Developing the Individual within a Team	1, 2, 4, 5, 6, 7, 10	13, 14, 15, 16, 17, 22, 25, 29
F33L 34	Dental Technology: Graded Unit 1	1, 2, 3, 4, 5, 6, 8, 10	13, 14, 15, 16, 17, 18, 19, 25, 29
F57G 35	Dental Technology: Graded Unit 2	1, 2, 3, 4, 5, 6, 8, 10	13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 29

Unit code	Unit title	General aims	Specific aims
D75X 34	Information Technology: Application Software 1	4, 5, 9, 10	13, 14, 15, 16, 17, 22, 24, 25, 29
DV60 34	Digital Imaging	4, 5, 9, 10	13, 14, 15, 16, 17, 22, 24, 25, 29
<b>Cluster Set 1</b>			
F43T 35	Dental Removable Prosthodontics: Complex Partial Dentures	1, 2, 3, 4, 5, 6, 8, 10	13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 29
F3G9 35	Dental Removable Prosthodontics: Implants	1, 2, 3, 4, 5, 6, 8, 10	13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 29
F3G7 35	Dental Removable Prosthodontics: Overdentures, Obturators and Precision Attachments	1, 2, 3, 4, 5, 6, 8, 10	13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 29
<b>Cluster Set 2</b>			
F43M 35	Dental Fixed Prosthodontics: Precision Attachments	1, 2, 3, 4, 5, 6, 8, 10	13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 29
F43N 35	Dental Fixed Prosthodontics: Veneers and Inlays	1, 2, 3, 4, 5, 6, 8, 10	13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 29
F43L 35	Dental Fixed Prosthodontics: Implants	1, 2, 3, 4, 5, 6, 8, 10	13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 29
<b>Cluster Set 3</b>			
F43R 35	Dental Orthodontics: Fixed Appliance Therapy	1, 2, 3, 4, 5, 6, 8, 10	13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 29
F3G6 35	Dental Orthodontics: Functional Appliances	1, 2, 3, 4, 5, 6, 8, 10	13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 29
F43S 35	Dental Orthodontics: Malocclusion	1, 2, 3, 4, 5, 6, 8, 10	13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 29

### 5.2.1 National Occupational Standards

Skills for Health is the Sector Skills Council responsible for the National Occupation Standards (NOS) in Oral Health. The quality design team took cognizance of the NOS and the European Occupational Standards and did a mapping exercise against these. Appendix 4 shows how the HN Units are mapped against the NOS.

### 5.3 Articulation, professional recognition and credit transfer

At present there are no formal articulation arrangements for HND candidates but former candidates have been accepted, on an individual basis, to the BSc (Hons) at Manchester Metropolitan University.

#### 5.3.1 Credit transfer

It is envisaged that during the transition programme some candidates may wish to transfer from:

- ◆ an HNC developed under the 1988 design principles to an HND validated under the 2003 design principles in the same subject area
- ◆ the first part of an HND developed under the 1988 design rules into an HND validated using the 2003 design principles in the same subject area

To facilitate this, it has been agreed that:

- ◆ such candidates need only achieve (within the 240 SCQF credit points required for the revised HND) Graded Units of 16 SCQF credit points at SCQF level 8 (instead of Graded Units of 8 SCQF credit points at SCQF level 7 and 16 SCQF credit point at SCQF level 8).
- ◆ achieve the Unit F1ME34 Dental Technology: Professional Responsibilities as there is no equivalent Unit in the old framework.
- ◆ however:
  - all candidates should be given opportunities to develop Core Skills required by end-users of the HN qualification
  - the candidate should be able to be given credit for the Units previously achieved in the 1988 design rules HNC and/or HND towards some of the Units in the revised HND.

Candidates are still required to meet the conditions of award for the revised HND. This means that a candidate transferring can gain the revised HND by achieving:

- ◆ the mandatory Units (either by credit transfer or normal study) within the revised framework
- ◆ a Graded Unit or Graded Units of 16 SCQF credit points at SCQF level 8
- ◆ the remaining SCQF credit points at the SCQF level required (either by credit transfer or normal study)
- ◆ development from the Core Skills required by the end-users of the Group Award

Although, in principle, candidates can be given credit transfer, specific credit transfer must be given on a Unit-by-Unit basis. Details of credit transfer arrangements from old Units to new Units is given in Appendix 5.

## **6 Approaches to delivery and assessment**

### **6.1 Content and context**

The awards have been designed as specialist Group Awards to meet the needs of the Dental Technology Sector. They will allow candidates to gain skills and knowledge in the core areas of Dental Technology and to apply these in a practical dental laboratory situation. The awards are aimed at candidates who wish to develop the necessary skills to progress further in training or employment.

Although the Units are designed to be delivered as part of the Group Awards, it is possible for all of them to be offered as stand-alone qualifications.

### **6.2 Delivery and assessment**

#### **6.2.1 Mode of delivery**

It is recommended the HNC award be offered:

- ◆ Full-time
- ◆ Day release, block release or evening provision if candidates are in relevant employment within a dental laboratory

However, it is unlikely that candidates entering the full-time HNC programme with minimal entry qualifications will achieve the necessary competencies in less than one year of full-time study. Part-time candidates following the day-release or block-release mode of attendance will normally complete the programme in two academic years. The amount of time to complete the course using evening provision only would depend on the provision available. Suitably experienced candidates may be able to undertake accelerated assessment.

It is recommended the HND award be offered:

- ◆ Full-time
- ◆ Day release or evening provision if candidates are in relevant employment within a dental laboratory

It is unlikely that candidates entering the full-time HND programme with minimal entry qualifications will achieve the necessary competencies in less than two years of full-time study. Part-time candidates following the day-release mode of attendance will normally complete the programme in four academic years. The amount of time to complete the course using evening provision only would depend on the provision available. Suitably experienced candidates may be able to undertake accelerated assessment.

Specific advice is given on the feasibility of delivering each Unit by open/distance learning is given within the individual Unit specifications. Consultation is ongoing regarding the development of on-line assessment.

### 6.2.2 Sequence of delivery

There may be the opportunity to integrate some delivery and/or assessments within the HNC/1st year HND Units — Appendix 6 gives further details.

Candidates need to develop the basic metalwork theories and techniques before undertaking the Units which have metalwork tasks within them. It is for this reason that *Dental Alloy Techniques* (F1M5 34) should be offered before *Dental Removable Prosthodontics: Partial Dentures* (F1MD 34) and *Dental Fixed Prosthodontics: Bonded Restorations* (F1M8 34) and *Dental Orthodontic Technology: Removable Appliances* (F1MA 34).

The Units *Dental Oral and Facial Anatomy* (F1M9 34) and *Dental Biomaterials* (F1M6 34) can be studied progressively with the practical Units as they support the understanding of the design and manufacturing criteria for the construction of dental appliances. The Unit *Dental Technology: Professional Responsibilities* (F1ME 34) can be offered at any point during the programme but it is recommended that it be offered in the first semester.

It is recommended that all mandatory Units be delivered prior to the optional cluster within the second year of the HND programme.

Graded Unit 1 should be assessed towards the end of the HNC course or first year of the HND programme. Graded Unit 2 should be assessed towards the end of the HND second year.

Centres may choose the order in which to deliver the Units, according to their local market needs and resources. A recommended delivery schedule has been produced for both full-time and day-release modes of delivery — see Appendix 7 for further details.

### 6.3 Assessment

The 2003 design principles for HN Group Awards encourage a more holistic approach to assessment and this has been adopted in the awards. The revised HN specification places the emphasis on assessing the whole Outcome or a combination of Outcomes rather than on individual Performance Criteria. The revised Unit specification also allows the use of ‘sampling’ knowledge and/or skills. This reduces the assessment loading for both candidates and centres. Details of when sampling can be used are given in the Unit specification, within the Evidence Requirements section, which specifies the elements of knowledge and/or skills that can be sampled. If assessments have to be carried out under assessment conditions this will also be stated within the Evidence Requirements for example:

- ◆ Joint/combined assessment of Outcomes
- ◆ Time guidelines for the duration of the assessment
- ◆ Supervision of assessment

Assessment procedures and assessment instruments will be subject to internal and external verification.

### 6.3.1 Re-assessment

The way that centres reassess candidates is integral to the way that they manage assessment as a whole and as such, will be subject to internal verification. In order to ensure that the assessment process is as holistic as possible and that assessors are able to effectively judge candidates' performance in the Outcome or Unit as a whole, it may not always be possible to reassess only those parts of the performance in which candidates have not satisfactorily demonstrated competence. Scenarios where candidates may require to re-do the whole assessment include:

- ◆ Assessments which test knowledge and other cognitive skills and where it may not be possible to extract some of the items for reassessment
- ◆ Where parts of several Outcomes are involved
- ◆ Where a project has been designed as an integrated assessment and where there is a requirement to complete the project as a single complex task

Candidates may require to do only part of an assessment, where their evidence has been generated over a period of time and/or a discrete part of the Unit, such as an Outcome, has been assessed originally.

When sampling is used, to ensure that candidates are not able to foresee what items they will be questioned about, a different sample of the knowledge and/or skills items is required each time the Outcome is assessed.

### 6.3.2 Re-assessment opportunities

Reassessment may be in accordance with the Centre's assessment policy and the professional judgement of the assessor. SQA advises that there should normally be one, or in exceptional circumstances two, re-assessment opportunities. (Please refer to SQA's *Guide to Assessment and Quality Assurance for Colleges of Further Education, August 2003 revision*).

### 6.3.3 Developing alternative assessments

The design of the original assessments inform the reassessment process to a large extent, as these determine the type of assessment instruments used and the purpose of the assessment. Normally, centres build up banks of assessments which can be used in whole or part for reassessment purposes. Assessment writers should refer to the Unit specification when developing an alternative assessment and ensure that it is of equal demand to the original assessment and that it covers all necessary criteria — for example Core Skill achievement. Where candidates have not provided satisfactory evidence for knowledge and/or skill items which have been sampled, they would normally be reassessed on a different sample.

### 6.3.4 Re-assessing HN Graded Units

If candidates need to be reassessed in either of the Graded Units they should be provided with an alternative prescription. The Conditions of Assessment section on the Graded Unit specification gives additional guidance.

## 7 General information for centres

### Disabled candidates and/or those with additional support needs

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments, or considering whether any reasonable adjustments may be required. Further advice can be found on our website [www.sqa.org.uk/assessmentarrangements](http://www.sqa.org.uk/assessmentarrangements)

### Internal and external verification

All instruments of assessment used within this/these Group Award(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 and Quality Assurance for Colleges of Further Education* ([www.sqa.org.uk](http://www.sqa.org.uk)).

## 8 General information for candidates

The awards of HNC and HND Dental Technology are designed to give you the skills, knowledge and understanding required for success in current or future job opportunities within the dental technology profession. The HNC qualification will give you an award that will make you eligible to become a registered Dental Technician with the General Dental Council and give you an entry requirement into the second year of the HND in Dental Technology. The HND will extend your technical competence in all areas and enable you to gain advanced knowledge in one specialist area.

The awards place great emphasis on the development of practical skills and the ability to apply these skills in the workplace. The HNC consists of 12 mandatory credits. The HND consists of 30 credits, of which 7 credits relate to a chosen specialism.

A variety of assessment methods may be used throughout the awards. The practical components will require you to display competent technical performance in the manipulation of dental materials to a given prescription.

There are Graded Units within both the HNC and HND awards. The assessment of the Graded Units will take the form of practical projects carried out under timed, controlled conditions which will simulate a trade/bench test.

Employment opportunities may include working within the:

- ◆ NHS sector
- ◆ General practice laboratories
- ◆ Commercial laboratories

In addition you may:

- ◆ become an industry trade representative
- ◆ join the RAF as a dental technician
- ◆ become self-employed and run your own business

Progression opportunities include:

- ◆ enabling HNC candidates to progress to 2nd year HND in Dental Technology
- ◆ enabling HND candidates to progress to Higher Education
- ◆ consideration for entry to the NES Vocational Training Scheme (UK and EU candidates only)

The courses will allow you to develop:

- ◆ Competence in the manipulative techniques and skills required to design and manufacture a wide range of custom-made dental devices
- ◆ Communication and transferable skills to enable a good team approach to oral and dental care
- ◆ A thorough understanding of the importance of ethical practice and professionalism
- ◆ An appreciation of working in a safe environment and in compliance with health and safety regulations

## 9 Glossary of terms

**SCQF:** This stands for the Scottish Credit and Qualification Framework, which is a new way of speaking about qualifications and how they inter-relate. We use SCQF terminology throughout this guide to refer to credits and levels. For further information on the SCQF visit the SCQF website at [www.scqf.org.uk](http://www.scqf.org.uk)

**SCQF credit points:** One HN credit is equivalent to 8 SCQF credit points. This applies to all HN Units, irrespective of their level.

**SCQF levels:** The SCQF covers 12 levels of learning. HN Units will normally be at levels 6–9. Graded Units will be at level 7 and 8.

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

**Graded Unit:** Graded Units assess candidates' 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 candidates to retain and adapt their skills and knowledge.

**Dedicated Unit to cover Core Skills:** This is a non-subject Unit that is written to cover one or more particular Core Skills.

**Embedded Core Skills:** This is where the development of a Core Skill is incorporated into the Unit and where the Unit assessment also covers the requirements of Core Skill assessment at a particular level.



**Signposted Core Skills:** This refers to the opportunities to develop a particular Core Skill at a specified level that lie outwith automatic certification.

**Qualification Design Team:** The QDT works in conjunction with a Qualification Manager/Development Manager to steer the development of the HNC/HND from its inception/revision through to validation. The group is made up of key stakeholders representing the interests of centres, employers, universities and other relevant organisations.

**Consortium-devised HNCs and HNDs** are those developments or revisions undertaken by a group of centres in partnership with SQA.

**Specialist single centre and specialist collaborative devised HNCs and HNDs** are those developments or revisions led by a single centre or small group of centres who provide knowledge and skills in a specialist area. Like consortium-devised HNCs and HNDs, these developments or revisions will also be supported by SQA.

## 10 Appendices

- Appendix 1 General Dental Council (GDC) Criteria for Dental Technicians (Parts 2A and 2B)
- Appendix 2 Core Skills mapping
- Appendix 3 Development of Core Skills
- Appendix 4 Mapping to National Occupational Standards
- Appendix 5 Credit transfer arrangements
- Appendix 6 Opportunities for integration of delivery/assessment
- Appendix 7 Suggested delivery schedules

## **Appendix 1: GDC Criteria for Dental Technicians (Parts 2A and 2B)**

## **PART 2A**

### **THE PCD CURRICULA –COMMON SUBJECTS AND TOPICS**

#### **COMMON SUBJECTS AND TOPICS IN ALL PCD CURRICULA**

**40.** This section identifies those subjects and topics that should be covered in all programmes for student PCDs and provides a brief overview of the basis for their inclusion in these programmes. It should not be interpreted, however, as requiring every category of student PCD to be taught each of these common subjects and topics to the same extent, either in depth or breadth. Coverage should be related to the particular requirements of each category of PCD and to the background knowledge and skills necessary to support the subjects and topics that are more specific to their role. In order to ensure that this aspect is fully recognised, the learning Outcomes related to these common subjects and topics are not identified at the end of this section but at the end of each section in Part 2B, where they are linked to the particular category of PCD.

#### **BIOMEDICAL SCIENCES AND ORAL BIOLOGY**

**41.** The biomedical sciences range from molecular processes at the cellular level to anatomy and physiology of the whole body and include nutrition and genetics. While teaching in these subjects should be designed to provide sufficient base-line knowledge that will establish a foundation for other components throughout the programme, there is the need to ensure that these studies are appropriate to the essential requirements of the particular category of PCD student. In the case where joint teaching is provided with other healthcare workers and other members of the dental team, it is essential that these studies are relevant to the PCD student and that time is not spent on inappropriate material. The teaching in biomedical sciences should introduce the student to the principles of scientific thought and argument, including the evaluation of scientifically established facts, experimental design and statistics.

**42.** The oral and dental aspects of biological sciences should include the theoretical and practical instruction necessary to provide knowledge of the structure and function of the teeth and associated tissues and organs in sufficient detail as is relevant to the particular category of PCD student. Similar considerations should apply to the study of physiological and biochemical concepts relevant to the mouth, such as salivary and masticatory activity, as well as the changes that occur with the onset of oral and dental disease and with ageing. The role of oral micro-organisms in plaque formation and in oral and dental disease should be integrated with other aspects of the programme.

## **BEHAVIOURAL SCIENCES, COMMUNICATION SKILLS AND HEALTH INFORMATICS**

**43.** Behavioural sciences, including knowledge of social and cultural influences and communication skills, should be introduced at an early stage in courses for PCD students. The subjects concerned are principally psychology and sociology, which should be carefully integrated with the principles of the basic medical sciences and other subject matter and continued throughout the programme. Where the PCD student is to be involved in the care of patients, it is essential that teaching assumes its proper relevance to this activity.

**44.** Communication skills are an essential aspect of the education of the student PCD, as they facilitate effective team working and underpin the provision of high-quality patient care. They may be taught initially in role-playing situations and, where appropriate, with simulated patients. There should be emphasis on the need to communicate to patients the knowledge and understanding of treatment proposed or advice given. This is an appropriate stage to introduce complaints-handling skills. Students should also understand the importance of communication with other members of the dental team and other health professionals in the integrated provision of dental care. Communication skills must be taught longitudinally throughout the programme so that all student PCDs achieve good communication skills before they qualify.

**45.** Progress in information technology and particularly health informatics will continue to accelerate and become an important and integral part of dental clinical and laboratory practice. These technologies provide access to clinical, laboratory and educational information in a wide variety of formats. Ideally, students should start their programme equipped with sufficient skills to be able then to use these technologies, but in the event that they do not, provision must be made to facilitate their development of these skills in the early part of the programme. Subsequently, they should develop an understanding of the potential applications to contemporary healthcare of electronic sources of health information. Students should have an opportunity to use relevant information and communication technologies during their programme and must become aware of the law as it relates to data protection and patient confidentiality.

## **HUMAN DISEASE**

**46.** Sufficient instruction in human diseases and disorders should be given to enable student PCDs to understand their manifestations and significance insofar as they are relevant to the role or clinical activities undertaken by that particular category of PCD. All student PCDs should acquire sufficient general understanding of human disease processes to appreciate the principles underlying the maintenance of good health, the major signs of physical and mental illness, dealing with medical emergencies, and communicating effectively with patients, their relatives and other health professionals.

In addition, those student PCDs involved directly in the treatment of patients should acquire the skills necessary to elicit, update and record an appropriate medical history, with particular reference to cardiorespiratory diseases, haemorrhagic disorders, allergies and drug therapy. They should be able to recognise when a patient requires further medical assessment or is too ill to receive dental treatment. It is important that student PCDs appreciate their limitations in this regard and the need to seek advice from the referring practitioner whenever there are concerns about patient safety.

47. Subjects that will need to be covered to a variable degree include general pathology, medical microbiology, immunology, medicine, surgery, pharmacology and therapeutics. Care should be taken to avoid the inclusion of inappropriate or irrelevant material, to tailor the selection of topics to the requirements of the particular category of PCD, to integrate the various subjects concerned in the overall teaching of human disease and to ensure co-ordination with other subjects in the programme.

## **MEDICAL EMERGENCIES**

48. The GDC considers that at an early stage in their programme student PCDs must be given instruction in first aid, including the principles of cardiopulmonary resuscitation and its practice under realistic conditions. It is necessary for this practice to be repeated on an annual basis throughout the programme and for students to understand the necessity for subsequent annual repetition. Students should learn how to recognise and take appropriate action in situations such as: anaphylactic reaction, hypoglycaemia, upper respiratory obstruction, cardiac arrest, fits, vasovagal attack, inhalation or ingestion of foreign bodies, and haemorrhage.

## **LAW, ETHICS AND PROFESSIONALISM**

49. All student PCDs should understand the legal and ethical obligations of registration with the GDC, the responsibilities of the different members of the dental team, and the regulatory functions of the Council. Every student PCD should be aware of the principles and practices involved in dental audit and of the ethical responsibilities involved in participation in clinical and laboratory investigations and research, in the development of new therapeutic procedures, and in the application of the concepts of risk assessment and management. The ethical aspects of professional relationships should also be drawn to students' attention, and their reconciliation with personal and public morality. Student PCDs need to have some familiarity with the specific requirements of relevant aspects of the practice of dentistry in various settings, including reference to related regulations and to their legal obligations, for example in respect of child patients. They should recognise the need to maintain this awareness throughout their career. They should be aware of the sources of professional advice, such as from the dental defence organisations, and they should recognise and act upon their obligations as outlined in the GDC's publication *Maintaining Standards*. Because some facets of professional life are influenced by rapidly changing public attitudes and legislation, for example The Disability Discrimination Act and The Human Rights Act, it is important that the student PCD should be made aware of the developing nature of standards of conduct. Issues of professionalism, such as student behaviour with respect to alcohol and the use of recreational drugs, should be addressed.

**50.** The legal basis under which patients are treated and have laboratory services provided for them should be discussed and the student should appreciate the legal requirement to maintain full, accurate clinical and laboratory records. No student should proceed to treat patients without a proper understanding of the associated ethical responsibilities, especially consent, assault, duty of care and confidentiality.

**51.** Student PCDs should understand the importance of communication between members of the dental team and the patient, within the dental team, and with members of other healthcare professions. This helps to develop attitudes of empathy and insight in the student and provides the opportunity for discussion of contemporary ethical issues. Students should also be encouraged to understand their own responses to work pressures and their management. There may be opportunities for integrated or complementary teaching of legal and ethical issues with other topics such as pain, stress and anxiety, social class, poverty and the needs of children and the elderly.

**52.** There should be guidance on the key ethical and legal dilemmas confronting the contemporary PCD and on the basics of employment law. Student PCDs should have opportunities to consider the ethical and legal dimensions of day-to-day practice. For example, they should learn how to:

- ◆ handle patient complaints;
- ◆ ensure that patients' rights are protected;
- ◆ provide appropriate care for vulnerable patients;
- ◆ confront issues concerning treatment planning and the practice of medicine and dentistry within the context of limited financial resources;
- ◆ maintain confidentiality;
- ◆ deal with gender and racial issues;
- ◆ deal with colleagues failing their professional responsibilities;
- ◆ resolve differences of opinion arising within the dental team so that the patient receives optimum benefit;
- ◆ follow the precepts of working under delegated authority.

**53.** PCD students should also understand the practical and ethical considerations that should be taken into account when seeking patients' consent, such as:

- ◆ providing sufficient information about conditions and possible treatment;
- ◆ responding to questions;
- ◆ knowing who is the most appropriate person to give consent;
- ◆ gaining consent in emergencies;
- ◆ establishing a patient's capacity to give consent;
- ◆ statutory requirements that may need to be taken into account;
- ◆ gaining valid consent.

**54.** Ethical and safety issues should form an important part of the early elements of the curriculum and the ethical approach to patient care will subsequently be reinforced as clinical work is introduced, being broadened as time passes to encompass legal obligations. The course material must not ignore the moral and ethical dilemmas that confront the PCD in practice and special attention must be paid to the regulatory mechanisms of dentistry, particularly as they apply to general dental practice. Stress should be placed on good record keeping. The importance of continuing professional development should also be emphasised and understood.

## HEALTH AND SAFETY AND INFECTION CONTROL

**55.** Student PCDs should be able to take responsibility for their own safety and the safety of others, including patients, staff and fellow students. A modern approach to health and safety in the workplace should therefore be an essential part of the curriculum. Topics that must be discussed include infection control, control of substances hazardous to health, risk assessment, fire regulations, and safety problems associated with dental equipment and materials. Those student PCDs whose work will include any aspect of dental radiography and radiology must understand the safety aspects of radiographic equipment and the legal basis of radiographic practice. All student PCDs must be able to:

- ◆ adhere to health and safety legislation as it affects their clinical and laboratory practices;
- ◆ implement and perform satisfactory infection control and prevent physical, chemical or microbiological contamination in the clinic and the laboratory;
- ◆ arrange and use the working clinical and laboratory environment in the most safe and efficient manner for all patients, staff and fellow students.

## DENTAL BIOMATERIALS SCIENCE

**56.** Instruction in the properties, correct manipulation and the scientific principles underpinning the use of dental biomaterials is needed to equip the student PCD with the knowledge to select and handle these materials safely and effectively in the clinical or laboratory situation. Learning opportunities should be designed to meet the essential requirements of the particular category of PCD student and care should be taken that time is not spent on inappropriate course content.

## **PART 2 B**

### **DENTAL TECHNOLOGY**

#### **SUBJECTS AND TOPICS IN THE DENTAL TECHNOLOGY CURRICULUM ADDITIONAL TO THOSE IN PART 2A**

**135.** The subjects and topics and learning Outcomes for the dental technology curriculum are designed to enable a student to obtain a qualification based upon the achievement of a higher level of competence in one of the main components of the programme (ie Fixed Prosthodontics, Removable Prosthodontics or Orthodontics) than in the other two components. Care should always be taken, however, to ensure that the required learning Outcomes are also achieved for the two subsidiary components.

#### **INTEGRATION**

**136.** There is a fundamental need to ensure that the individual's developing practice of dental technology integrates awareness of the knowledge, understanding and evolving skills from a wide range of areas to their application to the design and manufacture of individual custom-made dental devices.

Integration is built on a sound knowledge of the properties of available materials, regional anatomy, fixed and removable prosthesis design, and applied construction techniques. It may require the dental technician to modify standard procedures, and be innovative to meet specific needs, using a coordinated, interactive and reflective approach when assessing the suitability of the various methods for manufacturing and modifying designs for such appliances. In addition, in their role as team members, student dental technicians should be able to advise on the advantages, limitations and appropriateness of different designs relevant to proposed treatment plans.

**137.** All student dental technicians must have a range of practical experiences in the manufacture of custom-made dental devices, including assessment, design and planning, preparation and quality control prior to supply. They should have practical experience of providing different forms of dental device for the same type of case using a range of techniques, designs and equipment.

**138.** Practical experience should be gained in working with actual patient cases to develop competence within the student's particular area of activity. Practical experience should also be gained in the receipt of cases, contract review and initial cast preparation for a broad range of technical work, followed by design and manufacturing activities. All student dental technicians should receive clear, supportive and formally recorded work-based development opportunities in specific areas of competence in a real work environment as part of their programmes. It is considered important that this should include experience in a clinical setting.



**139.** The programme should include teaching on the obligations of dental technicians to recognise when a patient's best interests are served by their referring a request for dental technical support to a more appropriately skilled colleague. The processes involved in managing such a decision should be known and understood.

**140.** Student dental technicians should understand the importance of quality assurance systems and standards in the manufacturing processes. Dental devices can have a significant effect on the health and safety of patients and other members of the dental team. Student dental technicians should be able to make a documented review of the dentist's requirements, to ensure that adequate information has been supplied by the dentist and to demonstrate an understanding of the manufacturing requirements for the design, choice of materials and processing parameters. Student dental technicians should be able to manufacture devices following defined and documented processes. Student dental technicians should know and be able to apply appropriate techniques for infection control and be able to demonstrate the efficient handling, storage and distribution of dental devices.

## **PREVENTIVE DENTISTRY**

**141.** Student dental technicians should be aware of the procedures, successes and limitations of preventive dentistry. They should be aware of the increasing emphasis placed on evidence-based treatment, and the potential benefits that can be obtained from designing and manufacturing dental appliances in a fashion which minimises their potential for causing further oral disease. This aspect of their training should include a component of contact with patients in a clinical environment.

**142.** Student dental technicians should appreciate that oral health promotion and preventive dentistry can enable patients to control their own oral health and support other forms of dental therapy.

## **DENTAL PUBLIC HEALTH**

**143.** In addition to teaching directed towards the treatment of individual patients, student dental technicians should be aware of the profession's wider responsibilities towards the community as a whole.

**144.** Student dental technicians should understand the sociological, behavioural, environmental, and economic factors which contribute to oral health or illness and the capacity of healthcare professionals to influence these. Courses should include an introduction to the principal methods and limitations of disease prevention and health promotion. They should encompass an introduction to the complexity of dental service delivery including:

- ◆ the different methods of payment and employment of all members of the dental team;
- ◆ the roles of different professional groups;
- ◆ equities of service provision and access to care and treatment for people with special needs.

## **INTRODUCTION TO DENTAL TECHNOLOGY**

**145.** Dental technology is a balance of knowledge, understanding and technical competence in the design and manufacture of dental appliances. It is important for student dental technicians to have a breadth of knowledge in all areas of dental technology and be able to demonstrate technical competence in the areas relevant to their programme level.

**146.** The GDC considers that student dental technicians on completion of their studies must be able to demonstrate fundamental knowledge, understanding and application of the core dental technology skills.

## **DENTAL TECHNOLOGY TECHNIQUES**

**147.** Student dental technicians should be able to:

- ◆ demonstrate an awareness of all health and safety practices, including potential hazards, cross-infection control and communication skills;
- ◆ work independently;
- ◆ evaluate their work critically;
- ◆ respond to change;
- ◆ design and manufacture dental prostheses and appliances in a broad range of areas to a clinically acceptable standard.

**148.** This aspect of the course is intended to develop the student dental technician's fundamental manipulative techniques and the skills required in initial model construction, and also basic procedures in fixed and removable prosthodontics. The student dental technician should understand the methods of manufacture used in forming and joining the various groups of materials used in dental technology and have a firm knowledge of how the physical properties of these are required to be maintained or enhanced by the fabrication methods.

## **CLINICAL SUPPORT**

**149.** To meet the needs of this part of the curriculum student dental technicians will learn how to communicate effectively with other members of the dental team, particularly with dentists. Student dental technicians should be aware of the high standard of clinical preparation required before fixed and removable prostheses can be manufactured. Student dental technicians should understand the requirements of having adequate information from the dentist. Working as a team is important if the patient is to benefit from the high standards of work of both dentists and technicians.

## **COMPREHENSIVE ORAL CARE**

**150.** The student dental technician must be given the opportunity to develop the appropriate knowledge and skills relevant to the manufacture of custom-made dental devices, whilst being made aware that this is only one part of the oral care which the patient might be receiving. The link to the other team members and their particular responsibilities and the team approach to patient care are essential and should be encouraged. The inclusion of complementary instruction from other dental team members would be seen as an obvious strength.

**151.** For the provision of comprehensive oral care within a team environment student dental technicians should have the opportunity to work with all members of the dental team.

**152.** The GDC considers it of importance that some of the staff of each dental technology programme choose to have part-time appointments, spending the remainder of their time in dental technical practice.

## **DENTAL RADIOLOGY AND IMAGING**

**153.** Student dental technicians should understand the principles which form the fundamentals of dental radiographic and imaging techniques. They should understand the application of radiological and imaging methods to support an assessment of prognosis and the planning of treatment. Student dental technicians should understand the radiographic appearance of various tissues and be able to interpret information supplied via dental radiographic and imaging techniques that are relevant to their activities.

This part of the course should integrate with other aspects to allow the student to be able to make a useful contribution to team dentistry.

## **APPLIED DENTAL TECHNOLOGY**

### **FIXED PROSTHODONTICS**

**154.** Fixed prosthodontics is concerned with the design and manufacture of restorations in the dental laboratory to restore individual teeth or provide restorations which are permanently fixed within the oral cavity. In fixed prosthodontics student dental technicians have the opportunity to apply previously developed skills in new ways to the design and manufacture of a wide range of fixed restorations, which enables the student dental technician to develop a comprehensive range of complex technological skills. Instruction is essential in the design and manufacture of a range of fixed prosthodontic restorations to conserve the existing dentition. Student dental technicians should develop a comprehensive knowledge and understanding of how clinical tooth preparation influences restoration design. They should be aware of the factors which influence the simulation of a natural appearance in a fixed restoration, and be able to apply a range of techniques to produce this effect.

**155.** To meet the needs of this part of the curriculum, student dental technicians will be required to develop the fundamental knowledge, understanding and skills, and the ability to apply these and the relevant design principles to the appropriate manufacturing techniques, from the receipt of the working impressions to the production of:

- ◆ inlays and crown restorations in metals;
- ◆ simple metal substructures for polymeric/ceramic restorations, and associated temporary restorations;
- ◆ single ceramic and polymeric tooth-coloured restorations, including those bonded to metal substructures;
- ◆ dental bridges;
- ◆ a range of temporary restorations.

**156.** It is important that the student dental technician receives instruction in the fundamental aspects of the applications of dental implants. Student dental technicians should be aware of implant therapy and how the technique can be integrated into the design and manufacture of single crowns and fixed and removable prostheses. The student dental technician should appreciate that the use of implants may require skills and knowledge beyond their current competence.

**157.** The student dental technician should receive instruction on the use of dental precision attachments and the manner in which they may be used to stabilise fixed and removable prostheses. The student dental technician should appreciate that the inclusion of precision attachments may require skills and knowledge beyond their current competence.

## **REMOVABLE PROSTHODONTICS**

**158.** Removable prosthodontics is concerned with the replacement of teeth and their supporting structures by patient-removable devices. Dental prostheses have to conform to strict biological, physical and mechanical principles if they are to restore lost functions effectively. Each patient presents individual problems that require a multi-disciplinary approach to understanding the problem and devising a solution, the provision of which needs highly developed manipulative skills. Newly qualified dental technicians must be competent to design and manufacture removable prostheses to a clinically acceptable standard. Advanced forms of prostheses can involve occlusal rehabilitation, sophisticated metal technology, precision attachments and implants. Student dental technicians should be aware of these types of prostheses and when they should refer the manufacture of these devices to more appropriately skilled dental technicians.

**159.** To meet the needs of this part of the curriculum, student dental technicians will be required to develop the fundamental knowledge, understanding and skills and the ability to apply these and the relevant design principles to the appropriate manufacturing techniques, from the receipt of the working impressions to the production of:

- ◆ complete dentures with polymeric bases, including designs that incorporate features to enhance their strength, or modify the loading patterns of the denture-bearing tissues;
- ◆ removable partial dentures with polymeric bases and wrought or cast metallic components;
- ◆ removable partial dentures with cast metal frameworks;
- ◆ polymeric occlusal splints and mouth protectors.

## **ORTHODONTICS**

**160.** This component of the programme reflects that area of dental technology concerned with knowledge and understanding of normal and abnormal tooth eruption and occlusion and malocclusion, and the techniques which may be used to modify these by controlled tooth movement.

**161.** In orthodontic dental technology, student dental technicians have the opportunity to apply previously developed skills in new ways to the design and manufacture of a wide range of orthodontic dental devices, which enables the student dental technician to develop a comprehensive range of complex technological skills. Knowledge of the application of simple orthodontic appliance therapy using removable devices in a range of cases should be developed, and an appreciation of the use and forms of extra-oral orthodontic techniques should support the individual's general understanding of the basis of the techniques. The student dental technician should be able to manufacture orthodontic devices that are normally produced within the dental laboratory, and to apply specific techniques used in repairing and modifying orthodontic appliances. Instruction is essential in the design and manufacture of a range of orthodontic custom-made devices to meet the prescription requirements. The student dental technician should develop a comprehensive knowledge and understanding of how the factors which influence the repositioning of teeth, and the design requirements in relation to tooth movement, relate to the application of predetermined forces by the appliance.

**162.** To meet the needs of this part of the curriculum, student dental technicians will need to develop the fundamental knowledge, understanding and skills related to the construction of custom-made orthodontic appliances. They should be able to apply:

- ◆ a range of communication, IT and model library storage methods used in orthodontics;
- ◆ design principles to the manufacture of removable orthodontic appliances;
- ◆ appropriate methods for orthodontic appliance modification and repair.

**163.** The student dental technician should have an awareness or appreciation of the range of other orthodontic treatment regimes.

## **ELECTIVE STUDIES**

**164.** Student dental technicians can obtain useful educational experience outside the confines of the formal curriculum by participation in dental technical work in centres other than their own, whether in the United Kingdom or overseas. The benefit of such visits may be enhanced by their being the focus of an individual or group project.

**165.** It is desirable, though not essential, for student dental technicians to visit other schools of dental technology or dental technical centres, or to have contact with the work environment either in the United Kingdom or abroad, during the period of technical study. The main objective should be to broaden the student dental technician's education by exploring the dental problems and dental management systems in another context. As far as possible, programmes should be designed to facilitate opportunities for elective studies. These visits might be arranged around a project consisting of either audit or research, and the results should be presented on return by student dental technicians in written form, or verbally before an audience.

# LEARNING OUTCOMES

**166.** The learning Outcomes required of newly qualified dental technicians are grouped below according to the subjects and topics given above in Parts 2A and 2B. The Outcomes are expressed in three levels:

**Be competent at:**

Newly qualified dental technicians should have a sound theoretical knowledge and understanding of the subject together with adequate practical experience to be able to resolve dental technological problems encountered independently;

**Have knowledge of:**

Newly qualified dental technicians should have a sound theoretical knowledge of the subject, but need have only limited practical experience;

**Be familiar with:**

Newly qualified dental technicians should have a basic understanding of the subject, but need not have direct practical experience or be expected to carry out procedures independently.

The newly qualified dental technician should:

## BIOMEDICAL SCIENCES AND ORAL BIOLOGY

- ◆ have knowledge of the biomedical sciences, oral physiology and craniofacial, oral and dental anatomy relevant to dental technology;
- ◆ be familiar with those aspects of general anatomy and physiology relevant to the practice of dental technology.

## BEHAVIOURAL SCIENCES, COMMUNICATION SKILLS AND HEALTH INFORMATICS

- ◆ be competent at using information technology;
- ◆ be competent at communication with patients, their families and carers, other members of the dental team and other healthcare professionals;
- ◆ have knowledge of managing patients from different social and ethnic backgrounds;
- ◆ have knowledge of working as part of the dental team;
- ◆ be familiar with the social and psychological issues relevant to the care of patients.

## HUMAN DISEASE

- ◆ have knowledge of the scientific principles of sterilisation, disinfection and antisepsis;
- ◆ be familiar with the main medical disorders which may impinge on dental treatment;
- ◆ be familiar with the work of other healthcare workers;
- ◆ be familiar with the place of dentistry in the provision of healthcare.

## **MEDICAL EMERGENCIES**

- ◆ be competent at carrying out resuscitation techniques;
- ◆ be familiar with the principles of first aid.

## **LAW, ETHICS AND PROFESSIONALISM**

- ◆ be competent at maintaining full, accurate laboratory records;
- ◆ have knowledge of patients' rights and how to handle complaints;
- ◆ have knowledge of the competency range of other members of the dental team;
- ◆ have knowledge of the regulatory functions of the GDC;
- ◆ be familiar with the responsibilities of consent, duty of care and confidentiality;
- ◆ be familiar with the legal and ethical obligations of registered members of the dental team;
- ◆ be familiar with the obligation to practise in the best interests of the patient at all times;
- ◆ be familiar with the need for lifelong learning and professional development;
- ◆ be familiar with the law as it applies to records.

## **HEALTH AND SAFETY AND INFECTION CONTROL**

- ◆ be competent at implementing and performing satisfactory infection control and preventing physical, chemical and microbiological contamination in the clinic and the laboratory;
- ◆ be competent at arranging and using the working clinical and laboratory environment in the most safe and efficient manner;
- ◆ have knowledge of health and safety legislation as it affects clinical and laboratory practice.

## **DENTAL BIOMATERIALS SCIENCE**

- ◆ be competent at the correct selection and manipulation of dental biomaterials used by the dental technician;
- ◆ have knowledge of the science that underpins the dental biomaterials used by the dental technician;
- ◆ have knowledge of the limitations of such dental biomaterials;
- ◆ be familiar with those aspects of biomaterials safety that relate to the work of the dental technician.

## **INTEGRATION**

- ◆ be competent at receiving work from the clinical area;
- ◆ be competent at using a variety of types of information and data to establish the requirements for a particular custom-made dental device;
- ◆ be competent at managing the manufacture of a range of custom-made dental devices within one of the following treatment modalities:
  - ◆ Fixed Prosthodontics;
  - ◆ Removable Prosthodontics;
  - ◆ Orthodontics.
- ◆ be competent at assessing the fitness for purpose both of custom-made dental devices employed in the manufacture of a dental prosthesis and of the final device itself;
- ◆ have knowledge of the procedures used in the design and manufacture of custom-made dental devices for Fixed and Removable Prosthodontics and Orthodontics;
- ◆ have knowledge of the design and manufacture of a range of custom-made dental devices, together with the provision of advice to other members of the dental team on aspects of their manufacture;
- ◆ have knowledge of how to meet the design requirements by re-working and changing of components to meet the patient's needs;
- ◆ have knowledge of when it is appropriate to refer a request for dental technical support to a more appropriately skilled colleague and of how to carry out such a procedure;
- ◆ have knowledge of quality assurance as it applies to the individual dental technician;
- ◆ be familiar with contract review for clinical cases;
- ◆ be familiar with the complex interactions between materials, designs and oral structures when reviewing the manufacture and acceptability of dental devices;
- ◆ be familiar with product standards in relation to dental devices.

## **PREVENTIVE DENTISTRY**

- ◆ be familiar with the procedures, successes and limitations of preventive dentistry;
- ◆ have knowledge of the ways to design and manufacture dental appliances in a fashion which minimises their potential for causing further oral disease.

## **DENTAL PUBLIC HEALTH**

- ◆ be familiar with the dental team's wider responsibilities towards the community as a whole;
- ◆ be familiar with the sociological, behavioural, environmental and economic factors which contribute to oral health or illness.

## **INTRODUCTION TO DENTAL TECHNOLOGY**

- ◆ be competent in the stages of manufacture of dental devices in areas relevant to the student's programme;
- ◆ be familiar with the design and manufacture of a range of fixed and removable dental devices and orthodontic appliances.



## **CLINICAL SUPPORT**

- ◆ be familiar with the clinical aspects of a range of restorative techniques that involve the manufacture of dental devices.

## **COMPREHENSIVE ORAL CARE**

- ◆ be familiar with the provision of a comprehensive approach to oral care.

## **DENTAL RADIOLOGY AND IMAGING**

- ◆ be familiar with the principles which underlie dental radiographic techniques;
- ◆ be familiar with the application of radiological and imaging methods to support dental treatment;
- ◆ be familiar with the radiographic appearance of various tissues of relevance to dental technology.

## **APPLIED DENTAL TECHNOLOGY**

### **FIXED PROSTHODONTICS**

- ◆ be competent at knowing when and how to progress fixed prosthodontic cases within the dental laboratory matched to treatment plans;
- ◆ be competent at the initial planning and preparation of fixed prosthodontic appliances for manufacture in the dental laboratory;
- ◆ have knowledge of the range of manufacturing methods and materials used to fabricate fixed prosthodontic restorations;
- ◆ have knowledge of the various technological procedures used in the dental laboratory during the production of veneers, inlays, crowns, bridges, and temporary restorations;
- ◆ be familiar with the treatment planning and design requirements related to the range of fixed prosthodontic restorations;
- ◆ be familiar with the clinical aspects of team provision of custom-made dental devices;
- ◆ be familiar with dental implants as an option for replacing missing teeth;
- ◆ be familiar with the range of dental laboratory techniques which have application in the use of dental implants;
- ◆ be familiar with the forms of precision attachments used as an option when fabricating fixed and removable prostheses;
- ◆ be familiar with the complex nature of the use of precision attachments in both fixed and removable custom-made dental devices.

### **REMOVABLE PROSTHODONTICS**

- ◆ be competent at knowing when and how to progress removable prosthodontic cases within the dental laboratory matched to treatment plans;
- ◆ be competent at the initial planning and preparation of removable prosthodontic appliances for manufacture in the dental laboratory;
- ◆ have knowledge of assessing the feasibility of meeting client requirements for custom-made dental devices;
- ◆ have knowledge of providing technical advice on the feasibility and design of custom-made dental devices;

- ◆ have knowledge of the design of complete dentures and:
  - their manufacture;
  - the incorporation of soft linings or modifications to improve their strength;
  - their repair.
- ◆ have knowledge of the design, manufacture, modification and repair of removable prosthetic devices;
- ◆ be familiar with the design and manufacture of complex removable prostheses;
- ◆ be familiar with the design and manufacture of occlusal splints, sleep apnoea devices and mouth guards;
- ◆ be familiar with the use of implants and precision attachments for the stabilisation of intra-oral prostheses.

## **ORTHODONTICS**

- ◆ be competent at knowing when and how to progress orthodontic cases within the dental laboratory matched to treatment plans;
- ◆ be competent at the initial planning and preparation of orthodontic appliances for manufacture in the dental laboratory;
- ◆ have knowledge of the range of manufacturing methods and materials used to fabricate removable orthodontic appliances;
- ◆ be familiar with the treatment planning and design requirements related to the range of orthodontic appliances;
- ◆ be familiar with the clinical aspects of team provision of removable orthodontic custom-made dental devices;
- ◆ be familiar with the inclusion of prosthetic teeth within removable orthodontic appliances.

## Appendix 2: Core Skills mapping

## Core Skills mapping — HNC/HND Dental Technology

Unit code	Unit title	Communication			Numeracy		Using IT	Problem Solving			Working with Others
		Written Communication Reading	Written Communication Writing	Oral Communication	Using Graphical Information	Using Number		Critical Thinking	Planning & Organising	Reviewing & Evaluating	
F1ME 34	Dental Technology: Professional Responsibilities		SCQF 6 (S)				SCQF 6 (S)		SCQF 5 (S)		
F1MC 34	Dental Removable Prosthodontics: Complete Dentures	SCQF 5 (S)	SCQF 6 (S)		SCQF 5 (S)	SCQF 5 (S)			SCQF 6 (S)	SCQF 6 (S)	
F1MD 34	Dental Removable Prosthodontics: Partial Dentures	SCQF 6 (S)		SCQF 6 (S)	SCQF 5 (S)	SCQF 5 (S)			SCQF 6 (S)	SCQF 6 (S)	
F1MB 34	Dental Orthodontic Technology	SCQF 5 (S)	SCQF 5 (S)			SCQF 5 (S)			SCQF 6 (S)	SCQF 6 (S)	SCQF 6 (S)
F1MA 34	Dental Orthodontic Technology: Removable Appliances		SCQF 5 (S)			SCQF 5 (S)			SCQF 6 (S)	SCQF 6 (S)	
F1M9 34	Dental Oral and Facial Anatomy	SCQF 6 (S)	SCQF 6 (S)				SCQF 6 (S)	SCQF 6 (S)			
F1M8 34	Dental Fixed Prosthodontics: Bonded Restorations	SCQF 5 (S)	SCQF 6 (S)			SCQF 5 (S)			SCQF 6 (S)	SCQF 6 (S)	
F1M7 34	Dental Fixed Prosthodontics	SCQF 5 (S)	SCQF 6 (S)			SCQF 5 (S)			SCQF 6 (S)	SCQF 6 (S)	

Unit code	Unit title	Communication			Numeracy		Using IT	Problem Solving			Working with Others
		Written Communication Reading	Written Communication Writing	Oral Communication	Using Graphical Information	Using Number		Critical Thinking	Planning & Organising	Reviewing & Evaluating	
F1M6 34	Dental Biomaterials	SCQF 6 (S)	SCQF 6 (S)				SCQF 6 (S)	SCQF 6 (S)			
F1M5 34	Dental Alloy Techniques	SCQF 6 (S)		SCQF 6 (S)	SCQF 6 (S)				SCQF 5 (S)		
F33L 34	Dental Technology Graded Unit 1	SCQF 6 (S)	SCQF 6 (S)			SCQF 6 (S)	SCQF 6 (S)	SCQF 6 (C)	SCQF 6 (C)	SCQF 6 (C)	SCQF 6 (S)
F3G7 35	Dental Removable Prosthodontics: Complex Complete Dentures		SCQF 6 (S)		SCQF 6 (S)		SCQF 6 (S)	SCQF 6 (S)	SCQF 6 (S)	SCQF 6 (S)	
F43K 35	Dental Fixed Prosthodontics: Bridgework		SCQF 6 (S)		SCQF 6 (S)		SCQF 6 (S)	SCQF 6 (S)	SCQF 6 (S)	SCQF 6 (S)	
F43P 35	Dental Orthodontics: Complex Removable Appliances		SCQF 6 (S)		SCQF 6 (S)		SCQF 6 (S)	SCQF 6 (S)	SCQF 6 (S)	SCQF 6 (S)	
F43T 35	Dental Removable Prosthodontics: Complex Partial Dentures		SCQF 6 (S)		SCQF 6 (S)		SCQF 6 (S)	SCQF 6 (S)	SCQF 6 (S)	SCQF 6 (S)	
F3G9 35	Dental Removable Prosthodontics: Implants		SCQF 6 (S)		SCQF 6 (S)		SCQF 6 (S)	SCQF 6 (S)	SCQF 6 (S)	SCQF 6 (S)	
F3G7 35	Dental Removable Prosthodontics: Overdentures, Obturators and Precision Attachments		SCQF 6 (S)		SCQF 6 (S)		SCQF 6 (S)	SCQF 6 (S)	SCQF 6 (S)	SCQF 6 (S)	

Unit code	Unit title	Communication			Numeracy		Using IT	Problem Solving			Working with Others
		Written Communication Reading	Written Communication Writing	Oral Communication	Using Graphical Information	Using Number		Critical Thinking	Planning & Organising	Reviewing & Evaluating	
F43M 35	Dental Fixed Prosthodontics: Precision Attachments		SCQF 6 (S)		SCQF 6 (S)		SCQF 6 (S)	SCQF 6 (S)	SCQF 6 (S)	SCQF 6 (S)	
F43N 35	Dental Fixed Prosthodontics: Veneers and Inlays		SCQF 6 (S)		SCQF 6 (S)		SCQF 6 (S)	SCQF 6 (S)	SCQF 6 (S)	SCQF 6 (S)	SCQF 5 (S)
F43L 35	Dental Fixed Prosthodontics: Implants		SCQF 6 (S)		SCQF 6 (S)		SCQF 6 (S)	SCQF 6 (S)	SCQF 6 (S)	SCQF 6 (S)	
F43R 35	Dental Orthodontics: Fixed Appliance Therapy		SCQF 6 (S)		SCQF 6 (S)		SCQF 6 (S)	SCQF 6 (S)	SCQF 6 (S)	SCQF 6 (S)	
F3G6 35	Dental Orthodontics: Functional Appliances		SCQF 6 (S)		SCQF 6 (S)		SCQF 6 (S)	SCQF 6 (S)	SCQF 6 (S)	SCQF 6 (S)	
F43S 35	Dental Orthodontics: Malocclusions		SCQF 6 (S)		SCQF 6 (S)	SCQF 6 (S)	SCQF 6 (S)	SCQF 6 (S)	SCQF 6 (S)	SCQF 6 (S)	

Unit code	Unit title	Communication			Numeracy		Using IT	Problem Solving			Working with Others
		Written Communication Reading	Written Communication Writing	Oral Communication	Using Graphical Information	Using Number		Critical Thinking	Planning & Organising	Reviewing & Evaluating	
DK2K 34	Getting Started in Business	SCQF 5 (S)	SCQF 5 (S)		SCQF 5 (S)	SCQF 5 (S)	SCQF 5 (S)		SCQF 6 (S)		
DF45 34	Developing the Individual Within The Team										SCQF 6 (E)
D75X 34	Information Technology Application Software 1						SCQF 6 (C)				
DV60 34	Digital Imaging						SCQF 6 (S)	SCQF 6 (S)	SCQF 6 (S)	SCQF 6 (S)	
New Unit	Dental Technology Graded Unit 2		SCQF 6 (S)			SCQF 6 (S)	SCQF 6 (S)	SCQF 6 (S)	SCQF 6 (S)	SCQF 6 (S)	SCQF 6 (S)

- S Signposted
- E Embedded
- C Automatic certification

## **Appendix 3: Core Skills development**



## Core Skill development and signposting for HNC/1st year HND in Dental Technology

Throughout the HNC/HND in Dental Technology there are opportunities to develop Core Skills to various SCQF levels. Detailed below are aspects from the Core Skills that candidates may have the opportunity to develop in the HNC/1<sup>st</sup> year HND Dental Technology.

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### Dental Technology: Professional Responsibilities (F1ME 34)

Core Skill	General skill	Specific skill	SCQF level
Communication	Reading	<i>Read and understand complex written communication</i>	6
	Writing	<i>Produce well-structured written communication on complex topics</i>	5
Problem Solving	Critical Thinking	<i>Analyse a complex situation or issue</i>	6
	Planning and Organising	<i>Plan, organise and complete a task</i>	5

In completing the class work of all Outcomes, candidates have the opportunity to develop the component Written Communication (reading) from the Core Skill *Communication* at level 6. Candidates will have the opportunity to analyse and evaluate complex information from a variety of dental literature sources. The general Core Skill that the candidate may have to complete is ‘Read and understand complex written communication’.

There is also the opportunity for the candidate to develop the component Critical Thinking from the Core Skill *Problem Solving* at SCQF level 6 while completing the class work of Outcomes 1, 2, and 3. In Outcome 1 the candidate could analyse the responsibilities of the dental technician within the laboratory setting for conforming to current health and safety, and biological hazard legislation. In Outcome 2 the candidate could analyse the responsibilities of the dental technician as part of the dental team in dental public health. In Outcome 3 the candidate is required to obtain a working knowledge of the current European legislation relating to Medical Devices, patient consent, confidentiality and duty of care. The general Core Skill that the candidate may have to complete is ‘Analyse a complex situation or issue’.

Outcomes 1 and 5 offer the candidate the opportunity to develop the component ‘Planning and Organising’ from the Core Skill *Problem Solving* at SCQF level 5. In Outcome 1 the candidate should demonstrate competent infection control within the laboratory; in doing so the candidate will identify and obtain the necessary resources to allow them to complete the task. In Outcome 5 the candidate is required to demonstrate the assessment of a person requiring assistance, including basic life support. This task will involve the identification of the necessary resources, planning and implementation of the assessment. The general Core Skill that the candidate may have to complete is ‘Plan, organise and complete a task’.

The assessment of this Unit may also contribute towards the component ‘Written Communication (writing)’ from the Core Skill *Communication* at SCQF level 5. Candidates may have to structure their responses, which could include complex vocabulary, accurately and using a logical structure. The general Core Skill that candidates may have to complete is ‘Produce well-structured written communication on complex topics’.

### Dental Oral and Facial Anatomy (F1M9 34)

Core Skill	General skill	Specific skill	SCQF level
Communication	Reading	<i>Read and understand complex written communication</i>	6
	Writing	<i>Produce well-structured written communication on complex topics</i>	5
Problem Solving	Critical Thinking	<i>Analyse a complex situation or issue</i>	6

In completing the class work of all Outcomes candidates have the opportunity to develop the component Written Communication (reading) from the Core Skill *Communication* at level 6. Candidates will have the opportunity to analyse and evaluate complex information from a variety of dental literature sources. The general Core Skill that the candidate may have to complete is 'Read and understand complex written communication'.

There is also the opportunity for the candidate to develop the component Critical Thinking from the Core Skill *Problem Solving* at SCQF level 6 while completing the class work of all Outcomes. In Outcome 1 the candidate is required to analyse the dynamics of the temporomandibular joint during various movements of the mandible. This will require the candidate to analyse the structure and function of the attached musculature to determine their range of movement. In Outcome 2 the candidate is required to investigate and describe the histology of the major muscles of facial expression, mastication and the floor of the mouth. In Outcome 3 the candidate is required to interpret the impact of various factors on the oral tissues. The general Core Skill that the candidate may have to complete is 'Analyse a complex situation or issue'.

The assessment of this Unit may also contribute towards the component Written Communication (writing) from the Core Skill *Communication* at SCQF level 5. Candidates may have to structure their responses, which could include complex vocabulary, accurately and using a logical structure. The general Core Skill that candidates may have to complete is 'Produce well-structured written communication on complex topics'.

### Dental Alloy Techniques (F1M5 34)

Core Skill	General skill	Specific sill	SCQF level
Communication	Reading	<i>Read and understand complex written communication</i>	6
	Writing	<i>Produce well-structured written communication on complex topics</i>	5
Problem Solving	Critical Thinking	<i>Analyse a complex situation or issue</i>	6
	Planning and Organising	<i>Plan, organise and complete a task</i>	5

In completing the class work of both Outcomes candidates have the opportunity to develop the component Written Communication (reading) from the Core Skill *Communication* at level 6. Candidates will have the opportunity to analyse and evaluate complex information from a variety of dental literature sources. The general Core Skill that the candidate may have to complete is 'Read and understand complex written communication'.

There is also the opportunity for the candidate to develop the component Planning and Organising from the Core Skill *Problem Solving* at SCQF level 5 while completing the practical work involved in both Outcomes. The candidate will need to identify the appropriate strategy and implement this strategy in the construction of cast cobalt chromium baseplate; full gold shell crown and removable orthodontic appliance. The general Core Skill that the candidate may have to complete is 'Plan, organise and complete a task'.

In Outcome 1 there is the opportunity for the candidate to further develop the component Critical Thinking from the Core Skill *Problem Solving* at level 6. The candidate will be required to investigate the processes involved in the manipulation of dental alloys. The general Core Skill that the candidate may have to complete is 'Analyse a complex situation or issue'.

The assessment of this Unit may also contribute towards the component Written Communication (writing) from the Core Skill *Communication* at SCQF level 5. Candidates may have to structure their responses, which could include complex vocabulary, accurately and using a logical structure. The general Core Skill that candidates may have to complete is 'Produce well-structured written communication on complex topics'.

### Dental Biomaterials (F1M6 34)

Core Skill	General skill	Specific skill	SCQF level
Communication	Reading	<i>Read and understand complex written communication</i>	6
	Writing	<i>Produce well-structured written communication on complex topics</i>	5
Problem Solving	Critical Thinking	<i>Analyse a complex situation or issue</i>	6

In completing the class work of Outcomes 1 and 2 candidates have the opportunity to develop the component Written Communication (reading) from the Core Skill *Communication* at level 6. Candidates will have the opportunity to analyse and evaluate complex information from a variety of dental literature sources. The general Core Skill that the candidate may have to complete is Read and understand complex written communication.

There is also the opportunity for the candidate to develop the component Critical Thinking from the Core Skill *Problem Solving* at SCQF level 6 while completing the class work of Outcome 1. The candidate may identify the tests required of a dental biomaterial and assess their applicability in any given situation. The candidate could then be required to justify their approach with support from the literature. The general Core Skill that the candidate may have to complete is ‘Analyse a complex situation or issue’.

In Outcome 3 there is the opportunity for the candidate to further develop the component Written Communication (reading) from the Core Skill *Communication* at level 6. The candidate will be required to understand the Safe Operating Procedures (SOPs) for the equipment within the dental laboratory and the relevant Control of Substances Hazardous to Health (COSHH) and their responsibilities as a dental professional under the current health and safety legislation. The general Core Skill that the candidate may have to complete is ‘Read and understand complex written communication’.

The assessment of this Unit may also contribute towards the component Written Communication (writing) from the Core Skill *Communication* at SCQF level 5. Candidates may have to structure their responses, which could include complex vocabulary, accurately and using a logical structure. The general Core Skill that candidates may have to complete is ‘Produce well-structured written communication on complex topics’.

### Dental Removable Prosthodontics: Partial Dentures (F1MD 34)

Core Skill	General skill	Specific skill	SCQF level
Communication	Reading	<i>Read and understand complex written communication</i>	5
	Writing	<i>Produce well-structured written communication on complex topics</i>	5
Problem Solving	Planning and Organising	<i>Plan, organise and complete a task</i>	6
	Reviewing and Evaluating	<i>Review and Evaluate a complex problem solving activity</i>	6
Numeracy	Using Number	<i>Apply a range of straightforward numerical skills in everyday contexts</i>	4

In completing the class work of Outcome 1 candidates have the opportunity to develop the component Written Communication (reading) from the Core Skill *Communication* at level 5. Candidates will have the opportunity to analyse and evaluate complex information from a variety of dental literature sources. The general Core Skill that the candidate may have to complete is 'Read, understand and evaluate written communication'.

There is also the opportunity for the candidate to develop the components Planning and Organising and Reviewing and Evaluating from the Core Skill *Problem Solving* at SCQF level 6 while completing the class work of Outcome 2. In this Outcome the candidate will produce two cast metallic framework partial dentures, this will require the candidate to organise, plan and review the procedures involved in the task as well as evaluating the Outcome.

Outcome 3 the candidate will have the opportunity to develop the components Planning and Organising and Reviewing and Evaluating from the Core Skill *Problem Solving* at SCQF level 5 while completing the class work. The class work involves the candidate producing an acrylic denture incorporating a number of wrought clasps and a lingual bar, this will require the candidate to organise, plan and review the procedures involved in the tasks and evaluate the Outcome. The general Core Skills that the candidate may have to complete are 'Plan, organise and complete a task', 'Review and evaluate a problem solving activity'.

In Outcome 2 and 3 each of the practical exercises requires the candidate to be familiar with a variety of weights and measures. This will give the candidate the opportunity to develop the component *Numeracy* — Using Number from the Core Skill *Numeracy* at SCQF level 4.

The assessment of this Unit may also contribute towards the component Written Communication (writing) from the Core Skill *Communication* at SCQF level 5. Candidates may have to structure their responses, which could include complex vocabulary, accurately and using a logical structure. The general Core Skill that candidates may have to complete is 'Produce well-structured written communication on complex topics'.

## Dental Orthodontic Technology (F1MB 34)

Core Skill	General skill	Specific skill	SCQF level
Communication	Reading	<i>Read and understand complex written communication</i>	5
	Writing	<i>Produce well-structured written communication on complex topics</i>	5
Problem Solving	Planning and Organising	<i>Plan, organise and complete a task</i>	6
	Reviewing and Evaluating	<i>Review and Evaluate a complex problem solving activity</i>	6
Numeracy	Using Number	<i>Apply a range of straightforward numerical skills in everyday contexts</i>	4

In completing the class work of Outcomes 1 and 4 candidates have the opportunity to develop the component Written Communication (reading) from the Core Skill *Communication* at level 5. Candidates will have the opportunity to analyse and evaluate complex information from a variety of dental literature sources. The general Core Skill that the candidate may have to complete is 'Read, understand and evaluate written communication'.

There is also the opportunity for the candidate to develop the components Planning and Organising and Reviewing and Evaluating from the Core Skill *Problem Solving* at SCQF level 6 while completing the class work of Outcome 2. In this Outcome the candidate will produce three pieces of practical work: Michigan splint; maxillary mouth protector; and sleep apnoea appliance, this will require the candidate to organise, plan and review the procedures involved in the task as well as evaluating the Outcome.

Outcome 3 the candidate will have the opportunity to develop the components Planning and Organising and Reviewing and Evaluating from the Core Skill *Problem Solving* at SCQF level 5 while completing the class work. The class work involves the candidate producing one set of orthodontic trimmed study casts, this will require the candidate to organise, plan and review the procedures involved in the tasks. The candidate should also evaluate their Outcome. The general Core Skills that the candidate may have to complete are 'Plan, organise and complete a task', 'Review and evaluate a problem solving activity'.

In Outcome 2 and 3 each of the practical exercises requires the candidate to be familiar with a variety of weights and measures. This will give the candidate the opportunity to develop the component *Numeracy* — Using Number from the Core Skill *Numeracy* at SCQF level 4.

The assessment of this Unit may also contribute towards the component Written Communication (writing) from the Core Skill *Communication* at SCQF level 5. Candidates may have to structure their responses, which could include complex vocabulary, accurately and using a logical structure. The general Core Skill that candidates may have to complete is 'Produce well-structured written communication on complex topics'.

## Dental Fixed Prosthodontics (F1M7 34)

Core Skill	General skill	Specific skill	SCQF level
Communication	Reading	<i>Read and understand complex written communication</i>	5
	Writing	<i>Produce well-structured written communication on complex topics</i>	5
Problem Solving	Planning and Organising	<i>Plan, organise and complete a task</i>	6
	Reviewing and Evaluating	<i>Review and Evaluate a complex problem solving activity</i>	6
Numeracy	Using Number	<i>Apply a range of straightforward numerical skills in everyday contexts</i>	4

In completing the class work of all Outcomes candidates have the opportunity to develop the component Written Communication (reading) from the Core Skill *Communication* at level 5. Candidates will have the opportunity to analyse and evaluate complex information from a variety of dental literature sources. The general Core Skill that the candidate may have to complete is 'Read, understand and evaluate written communication'.

There is also the opportunity for the candidate to develop the components Planning and Organising and Reviewing and Evaluating from the Core Skill *Problem Solving* at SCQF level 5 while completing the class work of all Outcome 1. In this Outcome the candidate will produce three types of working models, this will require the candidate to organise, plan and review the procedures involved in the task as well as evaluating the Outcome. The general Core Skills that the candidate may have to complete are 'Plan, organise and complete a task', 'Review and evaluate a problem solving activity'.

In Outcome 3 the candidate has the opportunity to develop the components Planning and Organising and Reviewing and Evaluating from the Core Skill *Problem Solving* at SCQF level 6. The candidate has to produce four single Unit prosthodontic restorations. These restorations require careful planning, organising and reviewing to ensure that they reflect accurate tooth form. The general Core Skills that the candidate may have to complete are 'Plan, organise and complete a complex task', 'Review and evaluate a complex problem solving activity'.

In Outcome 1 and 3 each of the practical exercises requires the candidate to be familiar with a variety of weights and measures. This will give the candidate the opportunity to develop the component *Numeracy* — Using Number from the Core Skill *Numeracy* at SCQF level 4.

The assessment of this Unit may also contribute towards the component Written Communication (writing) from the Core Skill *Communication* at SCQF level 5. Candidates may have to structure their responses, which could include complex vocabulary, accurately and using a logical structure. The general Core Skill that candidates may have to complete is 'Produce well-structured written communication on complex topics'.

### Dental Removable Prosthodontics: Complete Dentures (F1MC 34)

Core Skill	General skill	Specific skill	SCQF level
Communication	Reading	<i>Read and understand complex written communication</i>	5
	Writing	<i>Produce well-structured written communication on complex topics</i>	5
Problem Solving	Planning and Organising	<i>Plan, organise and complete a task</i>	6
	Reviewing and Evaluating	<i>Review and Evaluate a complex problem solving activity</i>	6
Numeracy	Using Number	<i>Apply a range of straightforward numerical skills in everyday contexts</i>	4

In completing the class work of Outcome 1 candidates have the opportunity to develop the component Written Communication (reading) from the Core Skill *Communication* at level 5. Candidates will have the opportunity to analyse and evaluate complex information from a variety of dental literature sources. The general Core Skill that the candidate may have to complete is 'Read, understand and evaluate written communication'.

There is also the opportunity for the candidate to develop the components Planning and Organising and Reviewing and Evaluating from the Core Skill *Problem Solving* at SCQF level 6 while completing the class work of Outcome 2. In this Outcome the candidate will produce two sets of complete dentures: a class one malocclusion finished in acrylic resin; and either a class 2 or a class 3 malocclusion waxed-up for trial, this will require the candidate to organise, plan and review the procedures involved in the task as well as evaluating the Outcome.

Outcome 3 the candidate will have the opportunity to develop the components Planning and Organising and Reviewing and Evaluating from the Core Skill *Problem Solving* at SCQF level 5 while completing the class work. The class work involves the candidate producing replica (duplicate) denture, this will require the candidate to organise, plan and review the procedures involved in the tasks and evaluate the Outcome. The general Core Skills that the candidate may have to complete are 'Plan, organise and complete a task', 'Review and evaluate a problem solving activity'.

In Outcome 2 and 3 each of the practical exercises requires the candidate to be familiar with a variety of weights and measures. This will give the candidate the opportunity to develop the component *Numeracy* — Using Number from the Core Skill *Numeracy* at SCQF level 4.

The assessment of this Unit may also contribute towards the component Written Communication (writing) from the Core Skill *Communication* at SCQF level 5. Candidates may have to structure their responses, which could include complex vocabulary, accurately and using a logical structure. The general Core Skill that candidates may have to complete is 'Produce well-structured written communication on complex topics'.



## Dental Orthodontic Technology: Removable Appliances (F1MA 34)

Core Skill	General skill	Specific skill	SCQF level
Communication	Reading	<i>Read and understand complex written communication</i>	5
	Writing	<i>Produce well-structured written communication on complex topics</i>	5
Problem Solving	Planning and Organising	<i>Plan, organise and complete a task</i>	6
	Reviewing and Evaluating	<i>Review and Evaluate a complex problem solving activity</i>	6
Numeracy	Using Number	<i>Apply a range of straightforward numerical skills in everyday contexts</i>	4

In completing the class work of Outcomes 1 candidates have the opportunity to develop the component Written Communication (reading) from the Core Skill *Communication* at level 5. Candidates will have the opportunity to analyse and evaluate complex information from a variety of dental literature sources. The general Core Skill that the candidate may have to complete is 'Read, understand and evaluate written communication'.

There is also the opportunity for the candidate to develop the components Planning and Organising and Reviewing and Evaluating from the Core Skill *Problem Solving* at SCQF level 6 while completing the class work of Outcome 2. In this Outcome the candidate will produce four removable appliances with active components and one space maintainer appliance, this will require the candidate to organise, plan and review the procedures involved in the task. The candidate should also evaluate their Outcome. The general Core Skills that the candidate may have to complete are 'Plan, organise and complete a complex task', 'Review and evaluate a complex problem solving activity'.

Outcome 3 the candidate will have the opportunity to develop the components Planning and Organising and Reviewing and Evaluating from the Core Skill *Problem Solving* at SCQF level 5 while completing the class work. The class work involves the candidate repairing and modifying existing removable orthodontic appliances, this will require the candidate to organise, plan and review the procedures involved in the tasks. The candidate should also evaluate their Outcome. The general Core Skills that the candidate may have to complete are 'Plan, organise and complete a task', 'Review and evaluate a problem solving activity'.

In Outcome 2 and 3 each of the practical exercises requires the candidate to be familiar with a variety of weights and measures. This will give the candidate the opportunity to develop the component *Numeracy* — Using Number from the Core Skill *Numeracy* at SCQF level 4.

The assessment of this Unit may also contribute towards the component Written Communication (writing) from the Core Skill *Communication* at SCQF level 5. Candidates may have to structure their responses, which could include complex vocabulary, accurately and using a logical structure. The general Core Skill that candidates may have to complete is 'Produce well-structured written communication on complex topics'.

### Dental Fixed Prosthodontics: Bonded Restorations (F1M8 34)

Core Skill	General skill	Specific skill	SCQF level
Communication	Reading	<i>Read and understand complex written communication</i>	5
	Writing	<i>Produce well-structured written communication on complex topics</i>	5
Problem Solving	Planning and Organising	<i>Plan, organise and complete a task</i>	6
	Reviewing and Evaluating	<i>Review and Evaluate a complex problem solving activity</i>	6
Numeracy	Using Number	<i>Apply a range of straightforward numerical skills in everyday contexts</i>	4

In completing the class work of Outcomes 1 and 2 candidates have the opportunity to develop the component Written Communication (reading) from the Core Skill *Communication* at level 5. Candidates will have the opportunity to analyse and evaluate complex information from a variety of dental literature sources. The general Core Skill that the candidate may have to complete is 'Read, understand and evaluate written communication'.

There is also the opportunity for the candidate to develop the components Planning and Organising and Reviewing and Evaluating from the Core Skill *Problem Solving* at SCQF level 6 while completing the class work of all Outcome 3. In this Outcome the candidate will produce one single Unit bonded restoration and one multiple Unit bonded restoration, this will require the candidate to organise, plan and review the procedures involved in the task as well as evaluating the Outcome. The general Core Skills that the candidate may have to complete are 'Plan, organise and complete a task', 'Review and evaluate a complex problem solving activity'.

Also in Outcome 3 each of the practical exercises requires the candidate to be familiar with a variety of weights and measures. This will give the candidate the opportunity to develop the component *Numeracy* — Using Number from the Core Skill *Numeracy* at SCQF level 4.

The assessment of this Unit may also contribute towards the component Written Communication (writing) from the Core Skill *Communication* at SCQF level 5. Candidates may have to structure their responses, which could include complex vocabulary, accurately and using a logical structure. The general Core Skill that candidates may have to complete is 'Produce well-structured written communication on complex topics'.

# Appendix 4: Mapping to National Occupational Standards

## NATIONAL OCCUPATIONAL STANDARDS MAPPING

The grid below maps the knowledge and skills covered in the SQA HNC/1st year HND in Dental Technology against the underpinning knowledge of the Skills for Health NOS in Oral Health (Dental Technology).

<b>F</b>	Full coverage of the NOS Unit
<b>P</b>	Partial coverage of the NOS Unit
	No coverage of the NOS Unit

NOS UNIT NUMBERS and TITLES	SQA UNIT TITLES										
	Dental Technology: Professional Responsibilities	Dental Oral and Facial Anatomy	Dental Biomaterials	Dental Alloy Techniques	Dental Removable Prosthetics: Partial Dentures	Dental Removable Prosthetics: Complete Dentures	Dental Fixed Prosthetics	Dental Fixed Prosthetics: Bonded Restorations	Dental Orthodontic: Technology	Dental Orthodontic Technology: Removable Appliances	Dental Technology Graded Unit 1
DT01: Assess the feasibility of meeting client requirements for custom-made dental devices	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>
DT02: Provide technical advice on the feasibility and design of custom made dental devices	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>
DT03: Produce custom-made trays, casts, base plates and occlusal registration rims for the design and manufacture of removable prostheses.	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>			<b>P</b>	<b>P</b>	<b>P</b>
DT04: Design and manufacture simple complete removable prostheses	<b>P</b>	<b>P</b>	<b>P</b>			<b>P</b>					<b>P</b>
DT05: Design and manufacture complex complete removable prostheses											

NOS UNIT NUMBERS and TITLES	SQA UNIT TITLES										
	Dental Technology: Professional Responsibilities	Dental Oral and Facial Anatomy	Dental Biomaterials	Dental Alloy Techniques	Dental Removable Prosthodontics: Partial Dentures	Dental Removable Prosthodontics: Complete Dentures	Dental Fixed Prosthodontics	Dental Fixed Prosthodontics: Bonded Restorations	Dental Orthodontic: Technology	Dental Orthodontic Technology: Removable Appliances	Dental Technology Graded Unit 1
DT06: Design and manufacture simple partial removable prostheses	P	P	P	P	P						P
DT07: Design and manufacture complex partial removable prostheses											
DT08: Design and manufacture cast and wrought metallic components and cast frameworks for removable prostheses	P	P	P	P							P
DT09: Reline, rebase, repair and modify removable prostheses	P	P	P	P					P		
DT10: Prepare environments, custom-made trays, casts and dies for the design and manufacture of restorations	P	P	P				P	P			P
DT11: Design, manufacture and finish single and integral metallic restorations.	P		P	P			P	P			P
DT12: Design, manufacture and finish single metallic restorations and copings for the application of tooth coloured materials	P		P	P				P			P
DT13: Design and manufacture single tooth coloured restorations	P		P				P				P

NOS UNIT NUMBERS and TITLES	SQA UNIT TITLES										
	Dental Technology: Professional Responsibilities	Dental Oral and Facial Anatomy	Dental Biomaterials	Dental Alloy Techniques	Dental Removable Prosthodontics: Partial Dentures	Dental Removable Prosthodontics: Complete Dentures	Dental Fixed Prosthodontics	Dental Fixed Prosthodontics: Bonded Restorations	Dental Orthodontic: Technology	Dental Orthodontic Technology: Removable Appliances	Dental Technology Graded Unit 1
DT14: Design and manufacture metallic substructures and metallic bridge components	P	P	P	P				P			P
DT15: Design and manufacture single tooth coloured restorations based on metallic substructures	P	P	P					P			P
DT16: Design and manufacture tooth coloured bridge restorations based on non-metallic substructures											
DT17: Prepare, and produce casts and records for the design and manufacture of orthodontic appliances	P	P	P					P	P		P
DT18: Design and manufacture functional orthodontic appliances											
DT19: Design and manufacture fixed orthodontic appliances											
DT20: Design and manufacture conventional removable orthodontic appliances	P	P	P	P				P			P

NOS UNIT NUMBERS and TITLES	SQA UNIT TITLES										
	Dental Technology: Professional Responsibilities	Dental Oral and Facial Anatomy	Dental Biomaterials	Dental Alloy Techniques	Dental Removable Prosthodontics: Partial Dentures	Dental Removable Prosthodontics: Complete Dentures	Dental Fixed Prosthodontics	Dental Fixed Prosthodontics: Bonded Restorations	Dental Orthodontic: Technology	Dental Orthodontic Technology: Removable Appliances	Dental Technology Graded Unit 1
DT21: Design and manufacture complex removable orthodontic appliances											
DT22: Design and manufacture obturators											
DT23: Design and manufacture implant-based prostheses											
DT24: Design and manufacture prostheses using precision attachments											

## European National Occupational Standards Mapping

The grid below maps the knowledge and skills covered in the SQA HNC in Dental Technology against the underpinning knowledge of the European NOS in Oral Health (Dental Technology).

<b>F</b>	Full coverage of the ENOS Unit
<b>P</b>	Partial coverage of the ENOS Unit
	No coverage of the NOS Unit

ENOS UNIT NUMBERS and TITLES	SQA UNIT TITLES										
	Dental Technology: Professional Responsibilities	Dental Oral and Facial Anatomy	Dental Biomaterials	Dental Alloy Techniques	Dental Removable Prosthodontics: Partial Dentures	Dental Removable Prosthodontics: Complete Dentures	Dental Fixed Prosthodontics	Dental Fixed Prosthodontics: Bonded Restorations	Dental Orthodontic: Technology	Dental Orthodontic Technology: Removable Appliances	Dental Technology Graded Unit 1
EDT01 Assess the feasibility of meeting client requirements for custom-made dental devices	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>
EDT02 Prepare and maintain environments, materials and equipment for the design and manufacture of custom-made dental devices	<b>P</b>		<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>
EDT03 Produce custom-made trays to take impressions for custom-made dental devices											
EDT04 Provide technical advice on the feasibility and design of custom-made dental devices											



ENOS UNIT NUMBERS and TITLES	SQA UNIT TITLES										
	Dental Technology: Professional Responsibilities	Dental Oral and Facial Anatomy	Dental Biomaterials	Dental Alloy Techniques	Dental Removable Prosthetics: Partial Dentures	Dental Removable Prosthetics: Complete Dentures	Dental Fixed Prosthetics	Dental Fixed Prosthetics: Bonded Restorations	Dental Orthodontic: Technology	Dental Orthodontic Technology: Removable Appliances	Dental Technology Graded Unit 1
EDT05 Produce and prepare casts, base plates and occlusal registration rims for removable prostheses		<b>P</b>	<b>P</b>		<b>P</b>	<b>P</b>					<b>P</b>
EDT06 Design and manufacture complete removable prostheses	<b>P</b>	<b>P</b>	<b>P</b>			<b>P</b>					<b>P</b>
EDT07 Design and manufacture partial removable prostheses	<b>P</b>	<b>P</b>	<b>P</b>		<b>P</b>						<b>P</b>
EDT08 Design and manufacture cast and wrought metallic components and cast frameworks for removable prostheses	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>						<b>P</b>
EDT09 Reline, rebase, repair and modify removable prostheses											
EDT10 Design and manufacture obturators											
EDT11 Design and manufacture implant-based prostheses											
EDT12 Design and manufacture prostheses using precision attachments											

ENOS UNIT NUMBERS and TITLES	SQA UNIT TITLES										
	Dental Technology: Professional Responsibilities	Dental Oral and Facial Anatomy	Dental Biomaterials	Dental Alloy Techniques	Dental Removable Prostodontics: Partial Dentures	Dental Removable Prostodontics: Complete Dentures	Dental Fixed Prostodontics	Dental Fixed Prostodontics: Bonded Restorations	Dental Orthodontic: Technology	Dental Orthodontic Technology: Removable Appliances	Dental Technology Graded Unit 1
EDT13 Produce casts and dies for the design and manufacture of restorations		<b>P</b>	<b>P</b>				<b>P</b>				<b>P</b>
EDT14 Design, manufacture and finish single metallic restorations and copings	<b>P</b>		<b>P</b>	<b>P</b>			<b>P</b>	<b>P</b>			<b>P</b>
EDT15 Design, manufacture and assure the quality of metallic substructures and metallic bridge components	<b>P</b>		<b>P</b>	<b>P</b>				<b>P</b>			<b>P</b>
EDT16 Design and manufacture single tooth coloured restorations	<b>P</b>		<b>P</b>				<b>P</b>				<b>P</b>
EDT17 Design and manufacture non-metallic bridge substructures			<b>P</b>								
EDT18 Apply tooth coloured materials to substructures			<b>P</b>					<b>P</b>			<b>P</b>
EDT19 Assure the quality of tooth coloured restorations	<b>P</b>						<b>P</b>				<b>P</b>
EDT20 Produce and prepare casts and records for the design of orthodontic appliances		<b>P</b>	<b>P</b>						<b>P</b>		<b>P</b>
EDT21 Design and manufacture functional orthodontic appliances											

ENOS UNIT NUMBERS and TITLES	SQA UNIT TITLES										
	Dental Technology: Professional Responsibilities	Dental Oral and Facial Anatomy	Dental Biomaterials	Dental Alloy Techniques	Dental Removable Prosthodontics: Partial Dentures	Dental Removable Prosthodontics: Complete Dentures	Dental Fixed Prosthodontics	Dental Fixed Prosthodontics: Bonded Restorations	Dental Orthodontic: Technology	Dental Orthodontic Technology: Removable Appliances	Dental Technology Graded Unit 1
EDT22 Design and manufacture fixed orthodontic appliances											
EDT23 Design and manufacture removable orthodontic appliances		<b>P</b>	<b>P</b>	<b>P</b>						<b>P</b>	<b>P</b>

## NATIONAL OCCUPATIONAL STANDARDS MAPPING (cont)

The grid below maps the knowledge and skills covered in the SQA 2nd year HND Dental Technology against the underpinning knowledge of the Skills for Health NOS in Oral Health (Dental Technology).

<b>F</b>	Full coverage of the NOS Unit
<b>P</b>	Partial coverage of the NOS Unit
	No coverage of the NOS Unit

NOS UNIT NUMBERS and TITLES	SQA UNIT TITLES												
	DRP: Complex Complete Dentures	DFP:: Bridgework	Dental Orthodontics: Complex Removable Appliances	DRP: Complex Partial Dentures	DRP:: Implants	DRP: Over-dentures. Obturators and Precision Attachments.	DFP: Precision Attachments	DFP: Veneers and Inlays	DFP: Implants	Dental Orthodontics: Fixed Appliance Therapy	Dental Orthodontics: Functional Appliances	Dental Orthodontics: Malocclusions	Dental Technology Graded Unit 2
DT01: Assess the feasibility of meeting client requirements for custom-made dental devices	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>
DT02: Provide technical advice on the feasibility and design of custom made dental devices	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>
DT03: Produce custom-made trays, casts, base plates and occlusal registration rims for the design and manufacture of removable prostheses.	<b>P</b>			<b>P</b>									<b>P</b>

NOS UNIT NUMBERS and TITLES	SQA UNIT TITLES												
	DRP: Complex Complete Dentures	DFP:: Bridgework	Dental Orthodontics: Complex Removable Appliances	DRP: Complex Partial Dentures	DRP:: Implants	DRP: Over-dentures, Obturators and Precision Attachments.	DFP: Precision Attachments	DFP: Veneers and Inlays	DFP: Implants	Dental Orthodontics: Fixed Appliance Therapy	Dental Orthodontics: Functional Appliances	Dental Orthodontics: Malocclusions	Dental Technology Graded Unit 2
DT04: Design and manufacture simple complete removable prostheses													
DT05: Design and manufacture complex complete removable prostheses	<b>P</b>				<b>P</b>	<b>P</b>							<b>P</b>
DT06: Design and manufacture simple partial removable prostheses													
DT07: Design and manufacture complex partial removable prostheses				<b>P</b>		<b>P</b>							<b>P</b>
DT08: Design and manufacture cast and wrought metallic components and cast frameworks for removable prostheses				<b>P</b>	<b>P</b>	<b>P</b>							<b>P</b>
DT09: Reline, rebase, repair and modify removable prostheses													

NOS UNIT NUMBERS and TITLES	SQA UNIT TITLES												
	DRP: Complex Complete Dentures	DFP:: Bridgework	Dental Orthodontics: Complex Removable Appliances	DRP: Complex Partial Dentures	DRP:: Implants	DRP: Over-dentures, Obturators and Precision Attachments.	DFP: Precision Attachments	DFP: Veneers and Inlays	DFP: Implants	Dental Orthodontics: Fixed Appliance Therapy	Dental Orthodontics: Functional Appliances	Dental Orthodontics: Malocclusions	Dental Technology Graded Unit 2
DT10: Prepare environments, custom-made trays, casts and dies for the design and manufacture of restorations		<b>P</b>					<b>P</b>	<b>P</b>					<b>P</b>
DT11: Design, manufacture and finish single and integral metallic restorations.		<b>P</b>					<b>P</b>	<b>P</b>	<b>P</b>				<b>P</b>
DT12: Design, manufacture and finish single metallic restorations and copings for the application of tooth coloured materials													
DT13: Design and manufacture single tooth coloured restorations													

NOS UNIT NUMBERS and TITLES	SQA UNIT TITLES												
	DRP: Complex Complete Dentures	DFP:: Bridgework	Dental Orthodontics: Complex Removable Appliances	DRP: Complex Partial Dentures	DRP:: Implants	DRP: Over-dentures, Obturators and Precision Attachments.	DFP: Precision Attachments	DFP: Veneers and Inlays	DFP: Implants	Dental Orthodontics: Fixed Appliance	Dental Orthodontics: Functional Appliances	Dental Orthodontics: Malocclusions	Dental Technology Graded Unit 2
DT14: Design and manufacture metallic substructures and metallic bridge components		<b>P</b>					<b>P</b>		<b>P</b>				<b>P</b>
DT14: Design and manufacture metallic substructures and metallic bridge components		<b>P</b>					<b>P</b>		<b>P</b>				<b>P</b>
DT15: Design and manufacture single tooth coloured restorations based on metallic substructures													
DT16: Design and manufacture tooth coloured bridge restorations based on non-metallic substructures		<b>P</b>					<b>P</b>		<b>P</b>				

NOS UNIT NUMBERS and TITLES	SQA UNIT TITLES												
	DRP: Complex Complete Dentures	DFP:: Bridgework	Dental Orthodontics: Complex Removable Appliances	DRP: Complex Partial Dentures	DRP:: Implants	DRP: Over-dentures, Obturators and Precision Attachments.	DFP: Precision Attachments	DFP: Veneers and Inlays	DFP: Implants	Dental Orthodontics: Fixed Appliance Therapy	Dental Orthodontics: Functional Appliances	Dental Orthodontics: Malocclusions	Dental Technology Graded Unit 2
DT17: Prepare, and produce casts and records for the design and manufacture of orthodontic appliances			<b>P</b>							<b>P</b>	<b>P</b>	<b>P</b>	<b>P</b>
DT18: Design and manufacture functional orthodontic appliances											<b>P</b>		<b>P</b>
DT19: Design and manufacture fixed orthodontic appliances										<b>P</b>			<b>P</b>
DT20: Design and manufacture conventional removable orthodontic appliances			<b>P</b>										<b>P</b>
DT21: Design and manufacture complex removable orthodontic appliances			<b>P</b>										<b>P</b>



NOS UNIT NUMBERS and TITLES	SQA UNIT TITLES												
	DRP: Complex Complete Dentures	DFP: Bridgework	Dental Orthodontics: Complex Removable	DRP: Complex Partial Dentures	DRP: Implants	DRP: Over-dentures. Obturators and Precision Attachments.	DFP: Precision Attachments	DFP: Veneers and Inlays	DFP: Implants	Dental Orthodontics: Fixed Appliance	Dental Orthodontics: Functional Appliances	Dental Orthodontics: Malocclusions	Dental Technology Graded Unit 2
DT22: Design and manufacture obturators						<b>P</b>							
DT23: Design and manufacture implant-based prostheses					<b>P</b>				<b>P</b>				
DT24: Design and manufacture prostheses using precision attachments						<b>P</b>	<b>P</b>						

## Appendix 5: Credit transfer arrangements

<b>Old Unit code</b>	<b>Old Unit title</b>	<b>New Unit code</b>	<b>New Unit title</b>	<b>Credit transfer conditions</b>
N/A	Not Applicable	F1ME34	Dental Technology: Professional Responsibilities	No credit transfer. All candidates should pass this Unit as there was no equivalent in the old HN award.
D25R04	Oral and Facial Anatomy	F1M934	Dental Oral and Facial Anatomy	To gain credit transfer candidates will have to provide additional evidence as specified in the new Unit's Evidence Requirements in respect of: Outcome 1 (Explain the characteristics of the cleft palate). Outcome 3 (Effects of drugs, radiotherapy and surgery on the tongue and oral tissues). Outcome 4 – All.
D24Y04	Dental Material Science for Non-Metallic Materials used in the Oral Cavity	F1M634	Dental Biomaterials	To gain credit transfer candidates will have to provide additional evidence as specified in the new Unit's Evidence Requirements in respect of: Outcome 1 (Knowledge of Investment materials; Metals and alloys; Solders and fluxes). Outcomes 2 and 3 – All. If candidates have both D24Y 04 and D25A 04 they will only be required to show additional evidence for Outcome 3.
D25A04	Dental Material Science for Metallic Materials used in the Oral Cavity	F1M634	Dental Biomaterials	To gain credit transfer candidates will have to provide additional evidence as specified in the new Unit's Evidence Requirements in respect of: Outcome 1 (Knowledge of Polymeric denture base materials; dental porcelain; dental composites; permanent resilient lining materials; testing processes for dental materials). Outcome 3 – All. If candidates have both D24Y 04 and D25A 04 they will only be required to show additional evidence for Outcome 3.

<b>Old Unit code</b>	<b>Old Unit title</b>	<b>New Unit code</b>	<b>New Unit title</b>	<b>Credit transfer conditions</b>
D24G04	An Introduction to the Theory and Techniques of Casting, Finishing, Soldering, Welding and Heat Treatment of Dental Alloys and Wires.	F1M534	Dental Alloy Technology	Full credit transfer.
D24H04	Theory and Techniques of Simple, Complete, Immediate and Partial Denture Construction: An Introduction.	F1MD34	Dental Removable Prosthodontics: Partial Dentures	Full credit transfer.
D25B04	Preparations and Techniques for Producing Acrylic Crowns and Bridges: An Introduction	F1M734	Dental Fixed Prosthodontics	To gain credit transfer candidates will have to provide additional evidence as specified in the Unit's Evidence Requirements in respect of: Outcome 2. (Describe the processes for ceramic restorations and light cure composite). Outcome 3 (Show practical competence in constructing a Ceramic Restoration and a Light cure composite inlay).
D24J04	Theory and Techniques of Orthodontic Technology: An Introduction	F1MB34	Dental Orthodontic Technology	To gain credit transfer candidates will have to provide additional evidence as specified in the Unit's Evidence Requirements in respect of: Outcome 1 (Knowledge of the design features and function of protective and thermo-formed appliances). Outcome 2 (Show practical competence in the construction of 2 protective and 1 thermo-formed appliance).

<b>Old Unit code</b>	<b>Old Unit title</b>	<b>New Unit code</b>	<b>New Unit title</b>	<b>Credit transfer conditions</b>
D24K04	Theory and Techniques of Complex Metallic Partial Denture Construction	F1MD34	Dental Removable Prosthodontics: Partial Dentures	To gain credit transfer candidates will have to provide additional evidence as specified in the Unit's Evidence Requirements in respect of: Outcome 3 (Show practical competence in the construction of a partial denture containing a wrought bar and 2 gingivally approaching clasps and 1 occlusally approaching clasp).
D24L04	Theory and Techniques of Complete Denture Construction	F1MC34	Dental Removable Prosthodontics: Complete	Full credit transfer.
D25C04	Porcelain Crown and Porcelain Bonded to Metal Crowns: An Introduction	F1M734	Dental Fixed Prosthodontics	To gain credit transfer candidates will have to provide additional evidence as specified in the Unit's Evidence Requirements in respect of: Outcome 1 – All. Outcome 2 (Purpose and process of temporary restorations. Knowledge of the construction of light cured composite restorations and custom tapered posts). Outcome 3 (Show practical competence in the construction of: 1 x light cured composite inlay. 1 x Temporary crown. 1 x tapered custom post).
D25C04	Porcelain Crown and Porcelain Bonded to Metal Crowns: An Introduction	F1M834	Dental Fixed Prosthodontics: Bonded Restorations	Full credit transfer.

<b>Old Unit code</b>	<b>Old Unit title</b>	<b>New Unit code</b>	<b>New Unit title</b>	<b>Credit transfer conditions</b>
D25D04	Cast Metal Restorations and Porcelain Bonded to Metal Bridges: An Introduction	F1M8 34	Dental Fixed Prosthodontics: Bonded Restorations	To gain credit transfer candidates will have to provide additional evidence as specified in the Unit's Evidence Requirements in respect of: Outcome 1 - All Outcome 2 – All Outcome 3 – (Show practical competence in the construction of 1 single bonded Unit).
D25D04	Cast Metal Restorations and Porcelain Bonded to Metal Bridges: An Introduction	F1M7 34	Dental Fixed Prosthodontics	To gain credit transfer candidates will have to provide additional evidence as specified in the Unit's Evidence Requirements in respect of: Outcome 1 - All Outcome 2 – All except ceramic restorations. Outcome 3 – All except ceramic restorations.
D24M04	Theory of Orthodontic Therapy and Techniques of Orthodontic Technology	F1MA 34	Dental Orthodontic Technology: Removable Appliances	To gain credit transfer candidates will have to provide additional evidence as specified in the Unit's Evidence Requirements in respect of: Outcome 3 (Knowledge and practical competence in Repair of stainless steel components by soldering and spot welding).
D24N04	Theory and Techniques of Complex Orthodontic Technology	F1MA 34	Dental Orthodontic Technology: Removable Appliances	To gain credit transfer candidates will have to provide additional evidence as specified in the Unit's Evidence Requirements in respect of: Outcome 2 – All Outcome 3 – All

<b>MANDATORY UNITS — HND</b>				
<b>Old Unit code</b>	<b>Old Unit title</b>	<b>New Unit code</b>	<b>New Unit title</b>	<b>Credit transfer conditions</b>
A6HF04	Preparing and Presenting a Business Plan	DK2K34	Get Started in Business	No credit transfer
A6G733	Developing Personal Effectiveness	DF4534	Developing the Individual within the Team	No credit transfer
A6GD04	Using Information Technology in Business: Database and Word Processing	D75X34	Information Technology Application Software 1	No credit transfer
D25P04	Oral Biology and Dental Studies	F1M934	Dental Oral and Facial Anatomy	Full credit transfer
		New Unit	Dental Technology Graded Unit 2	
		F3G735	Dental Removable Prosthodontics: Complex Complete	No credit transfer
		F43K35	Dental Fixed Prosthodontics: Bridgework	No credit transfer
		F43P35	Dental Orthodontics: Complex Removable Appliances	No credit transfer

<b>CLUSTER SET 1: DENTAL REMOVABLE PROSTHODONTICS</b>				
<b>Old Unit code</b>	<b>Old Unit title</b>	<b>New Unit code</b>	<b>New Unit title</b>	<b>Credit transfer conditions</b>
D24S04	Theory, Techniques and Construction of Complex Partial Dentures	F43T35	Dental Removable Prosthodontics: Complex Partial Dentures	Full credit transfer
D24X04	Theory and Techniques of Prosthodontic Implant Construction.	F3G935	Dental Removable Prosthodontics: Implants	Full credit transfer
D24P04	Theory and Techniques of Partial and Complete Denture Construction Incorporating Precision Attachments	F3G735	Dental Removable Prosthodontics: Obturators, Over-dentures and Precision Attachments	To gain credit transfer candidates will have to provide additional evidence as specified in the Unit's Evidence Requirements in respect of: Outcome 1 – All Outcome 2 – All
D24R04	Theory, Techniques and Construction of Over-dentures and Dentures Incorporating Obturators	F3G735	Dental Removable Prosthodontics: Obturators, Over-dentures and Precision Attachments	To gain credit transfer candidates will have to provide additional evidence as specified in the Unit's Evidence Requirements in respect of: Outcome 3 – All



<b>CLUSTER SET 2: DENTAL FIXED PROSTHODONTICS</b>				
<b>Old Unit code</b>	<b>Old Unit title</b>	<b>New Unit code</b>	<b>New Unit title</b>	<b>Credit transfer conditions</b>
D25H04	Introduction To Crowns And Bridges Incorporating Precision Attachments	F43M 35	Dental Fixed Prosthodontics: Precision Attachments	To gain credit transfer candidates will have to provide additional evidence as specified in the Unit's Evidence Requirements in respect of: Outcome 2 (Show practical competence in the construction of a 3-Unit anterior bridge incorporating an intra-coronal attachment).
D25F04	Introduction To Porcelain Veneers And Composite And Porcelain Inlays	F43N 35	Dental Fixed Prosthodontics: Veneers and Inlays	Full credit transfer
		F43L 35	Dental Fixed Prosthodontics: Implants	No credit transfer Candidates choosing this option cluster should pass this Unit as there was no equivalent in the old HN award
D25J04	Construction Of Porcelain Bonded To Metal Bridges	F43K 35	Dental Fixed Prosthodontics: Bridgework	To gain credit transfer candidates will have to provide additional evidence as specified in the Unit's Evidence Requirements in respect of: Outcome 2 (Show practical competence in the construction 2 cast metal bridges 1 x semi-fixed and 1 x fixed-fixed)
D25G04	Principles And Construction Of Adhesive Bridges	F43K 35	Dental Fixed Prosthodontics: Bridgework	To gain credit transfer candidates will have to provide additional evidence as specified in the Unit's Evidence Requirements in respect of: Outcome 1 – All bridges except adhesive bridges Outcome 2 - All Outcome 3 – All

<b>CLUSTER SET 3: DENTAL ORTHODONTICS</b>				
<b>Old Unit code</b>	<b>Old Unit title</b>	<b>New Unit code</b>	<b>New Unit title</b>	<b>Credit transfer conditions</b>
D24V04	Theory And Techniques Of Fixed Appliance Therapy And Their Construction	F43R 35	Dental Orthodontics: Fixed Appliance Therapy	Full credit transfer
D24W04	Theory And Techniques Of Functional Appliance Therapy And Their Construction.	F3G6 35	Dental Orthodontics: Functional Appliances	Full credit transfer
D24T04	D24T04 Theory Of Malocclusion And Treatment Therapy, Techniques And Construction Of Complex Removable Appliances	F43S 35	Dental Orthodontics: Malocclusions	To gain credit transfer candidates will have to provide additional evidence as specified in the Unit's Evidence Requirements in respect of: Outcome 3 – all Outcome 4 – all
D25M04	The Surgical Treatment Of Cleft Lip And Palate Cases: An Introduction	F43S 35	Dental Orthodontics: Malocclusions	Full credit transfer. But must also gain Unit Dental Orthodontics: Complex Removable Appliances

## **Appendix 6: Opportunities for integration of Unit delivery/assessment**

## (HNC/1st year HND)

### Opportunities for Integration of Assessment

<b>Unit title</b>	<b>Integration opportunity</b>
Dental Alloy Techniques Outcome 2	Dental Orthodontic Technology: Removable Appliances Outcome 3
It is anticipated that centres will be able to teach and assess these Outcomes together due to the similar content.	
Dental Technology: Professional Responsibilities Outcome 1	Dental Alloy Techniques Outcomes 1 and 2
	Dental Removable Prosthodontics: Partial Dentures Outcomes 2 and 3
	Dental Removable Prosthodontics: Complete Dentures Outcomes 2 and 3
	Dental Fixed Prosthodontics Outcomes 1 and 3
	Dental Fixed Prosthodontics: Bonded Restorations Outcome 3
	Dental Orthodontic: Technology Outcomes 2 and 3
	Dental Orthodontic Technology: Removable Appliances Outcomes 2 and 3
It is anticipated that centres will be able to assess the candidate demonstrating competences of Outcome 1 whilst completing practical exercises in the laboratory setting.	
Dental Technology: Professional Responsibilities Outcome 1	Dental Biomaterials Outcome 3
It is anticipated that centres will be able to teach and assess parts of these Outcomes together due to the similar content.	

## **Appendix 7: Suggested delivery schedules**





### COURSE PROGRAMME FOR HNC DENTAL TECHNOLOGY - DAY RELEASE 2nd Year

YEAR		2008																2009																				
MONTH		SEPT			OCTOBER				NOV				DEC					JAN		FEB		MARCH			APRIL			MAY		JUNE								
Week Commencing																																						
Week Ending																																						
		BLOCK 1																BLOCK 2																				
C/O	Unit Number/Unit Title	CV	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
C	Dental Removable Prosthodontics: Complete Dentures	1																																				
C	Dental Fixed Prosthodontics: Bonded Restorations	1																																				
C	Dental Orthodontic Technology: Removable Appliances	1																																				
C	Dental Technology Graded Unit	1																																				

KEY	TP	THEORY AND PRACTICAL	RP	REMOVABLE PROSTHODONTICS	GUA	GRADED UNIT ASSESSMENT
	T	THEORY ONLY	OT	ORTHODONTIC TECHNOLOGY	R/R	REMIEDIATION/REASSESSMENT
	P	PRACTICAL ONLY	FP	FIXED PROSTHODONTICS	C/O	CORE OR OPTION UNIT



**COURSE PROGRAMME FOR HND DENTAL TECHNOLOGY YEAR 1**

YEAR	MONTH	2007																2008																							
		Sept				October				Nov				December				Jan				Feb				March				April				May				June			
		27	3	10	17	24	1	8	15	22	29	5	12	19	26	3	10	17	24	31	7	14	21	28	4	11	18	25	3	10	17	24	31	7	14	21	28	5	12	19	26
Week Commencing																																									
Week Ending																																									
		BLOCK 1																		BLOCK 2																					
C/O	Unit Number/Unit Title	CV	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36			
C	Dental Technology: Professional Responsibilities	1.5									TP1									TP4	R/R					T2											T3		R/R		
C	Dental Oral and Facial Anatomy	1.5								T1								T2							T3											T4			R/R		
C	Dental Biomaterials	1										T3														T1													T2	R/R	
C	Dental Alloy Techniques	1																																							
C	Dental Removable Prosthodontics: Partial Dentures	1																																							
C	Dental Removable Prosthodontics: Complete Dentures	1																																							
C	Dental Fixed Prosthodontics	1							P1																																
C	Dental Fixed Prosthodontics: Bonded Restorations	1																																							
C	Dental Orthodontic Technology	1																																							
C	Dental Orthodontic Technology: Removable Appliances	1																																							
C	Dental Technology Graded Unit	1																																							

KEY	TP	THEORY AND PRACTICAL	RP	REMOVABLE PROSTHODONTICS	GUA	GRADED UNIT ASSESSMENT
	T	THEORY ONLY	OT	ORTHODONTIC TECHNOLOGY	R/R	REMEDICATION/REASSESSMENT
	P	PRACTICAL ONLY	FP	FIXED PROSTHODONTICS	C/O	CORE OR OPTION UNIT

### PROGRAMME FOR HND DENTAL TECHNOLOGY YEAR 2

YEAR	2008															2009																										
	SEPT					OCT					NOV					DEC					JAN			FEB			MARCH			APRIL			MAY			JUNE						
Week Commencing	1	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29	5	12	19	26	2	9	16	23	2	9	16	23	30	6	13	20	27	4	11	18	25	1	8	15
Week Ending	1																																									
BLOCK 1																			BLOCK 2																							
C/O	Unit Number/Unit Title	CV	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36				
C	Getting Started in Business	1															R/R																									
C	Developing the Individual Within The Team	1																																								
O	ITAS/Digital Imaging	1															R/R																									
C	Dental Removable Prosthodontics: Complex Complete Dentures	2															R/R																									
C	Dental Fixed Prosthodontics: Bridgework	2															R/R																									
C	Ortho:Complex Removable Appliances	2															R/R																									
O	2 Credit Option unit Removable Pros/Fixed Pros/Ortho	2																																								
O	2 Credit Option unit Removable Pros/Fixed Pros/Ortho	2																																	R/R							
O	3 Credit Option unit Removable Pros/Fixed Pros/Ortho	3																																	R/R							
C	Graded Unit 2	2																																	R/R							

KEY	TP	THEORY AND PRACTICAL	RP	REMOVABLE PROSTHODONTICS	GUA	GRADED UNIT ASSESSMENT
	T	THEORY ONLY	OT	ORTHODONTIC TECHNOLOGY	R/R	REMEDIATION/REASSESSMENT
	P	PRACTICAL ONLY	FP	FIXED PROSTHODONTICS	C/O	CORE OR OPTION UNIT