



Higher National Unit specification

General information for centres

Unit title: Dental Fixed Prosthodontics: Precision Attachments

Unit code: F43M 35

Unit purpose: This Unit introduces candidates to the types of precision attachments used in fixed prosthodontics. It is designed to give candidates the knowledge and skills required to enable them to construct dental fixed restorations incorporating precision attachments.

On completion of the Unit the candidate should be able to:

- 1 Evaluate the types of precision attachments used in fixed prosthodontics.
- 2 Construct fixed prosthodontic restorations incorporating precision attachments.

Credit points and level: 2 HN credits at SCQF level 8: (16 SCQF credit points at SCQF level 8*)

**SCQF credit points are used to allocate credit to qualifications in the Scottish Credit and Qualifications Framework (SCQF). Each qualification in the Framework is allocated a number of SCQF credit points at an SCQF level. There are 12 SCQF levels, ranging from Access 1 to Doctorates.*

Recommended prior knowledge and skills: Although access to this Unit is at the discretion of the centre, it is recommended that candidates should have completed the HNC in Dental Technology or equivalent so that dental laboratory practice, working to a prescription, treatment planning skills and preparing products to a standard suitable for presentation to a clinical dental professional are established underpinning knowledge and/or skills. The ability to prepare submissions to a standard format, which includes Harvard referencing, would also be preferable.

Core Skills: There are opportunities to develop the component Written Communication of the Core Skill *Communication* at SCQF level 6, and the components Planning and Organising, Reviewing and Evaluating and Critical Thinking of the Core Skill *Problem Solving* at SCQF level 6 in this Unit. There are also opportunities to develop the Core Skill *Information Technology* at SCQF level 6, and the component Using Graphical Information of the Core Skill *Numeracy* at SCQF level 6, although there is no automatic certification of Core Skills or Core Skills components.

Context for delivery: If this Unit is delivered as part of a Group Award, it is recommended that it should be taught and assessed within the subject area of the Group Award to which it contributes.

Assessment: This Unit could be assessed using a candidate submission for Outcome 1. Outcome 2 is assessed by practical assessments carried out within a dental laboratory setting.

Higher National Unit specification: statement of standards

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The sections of the Unit stating the Outcomes, Knowledge and/or Skills, and Evidence Requirements are mandatory.

Where evidence for Outcomes is assessed on a sample basis, the whole of the content listed in the Knowledge and/or Skills section must be taught and available for assessment. Candidates should not know in advance the items on which they will be assessed and different items should be sampled on each assessment occasion.

Outcome 1

Evaluate the types of precision attachments used in fixed prosthodontics

Knowledge and/or Skills

- ◆ Types of precision attachments
- ◆ Function of precision attachments
- ◆ Positioning of attachments
- ◆ Indications and contra-indications

Evidence Requirements

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can, in terms of strengths and weaknesses, evaluate:

- ◆ the type, function, positioning, indications and contra-indications of the precision attachments (intra-coronal; extra-coronal; stud and bar) used in fixed prosthodontics

Candidates must accurately evaluate, with the aid of diagrams, the types and uses of precision attachments.

Assessment Guidelines

This Outcome could be assessed in the form of a candidate submission. Whilst the format the submission takes is left to the discretion of the centre it is recommended that such a submission be the equivalent to 1,500 words (excluding appendices and diagrams). The submission may be presented in any suitable way to ensure Disability Discrimination Act (DDA) compliance. Examples of suitable formats are: oral questioning; candidate presentation; and candidate report. Further details are given in the Support Notes.

Higher National Unit specification: statement of standards (cont)

Unit title: Dental Fixed Prosthodontics: Precision Attachments

Outcome 2

Construct fixed prosthodontic restorations incorporating precision attachments

Knowledge and/or Skills

- ◆ Dental bridges
- ◆ Dental crowns
- ◆ Intra-coronal attachments
- ◆ Extra-coronal attachments
- ◆ Oral aesthetics

Evidence Requirements

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can construct:

- ◆ one 3-Unit anterior sited dental bridge incorporating an intra-coronal precision attachment, with the matrix, retainers and patrix positioned accurately
- ◆ one 3-Unit posterior sited dental bridge incorporating an intra-coronal precision attachment, with the matrix, retainers and patrix positioned accurately
- ◆ two dental crowns or one dental bridge incorporating an extra-coronal precision attachment, with the matrix, retainers and patrix positioned accurately

Working to a prescription and aesthetic considerations, candidates must fabricate the above precision attachments to a finish and accuracy ready for delivery to the clinical dental professional. For each of practical tasks the candidate will need to ensure that they are contoured and occluded accurately with the opposing arch and polished to the standard required for oral aesthetics.

These practical assessments must be carried out within a dental laboratory setting.

Assessment Guidelines

Candidates will produce two 3-Unit dental bridges incorporating precision attachments and two crowns or alternately one dental bridge incorporating an extra-coronal precision attachment choosing types to meet the prescriptions provided by the centre.

Administrative Information

Unit code:	F43M 35
Unit title:	Dental Fixed Prosthodontics: Precision Attachments
Superclass category:	PF
Original date of publication:	August 2008 (November 2008)
Version:	02

History of changes:

Version	Description of change	Date
02`	Credit value reduced to 2. Now carries 16 SCQF credit points at level 8	12/11/08

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Higher National Unit specification: support notes

Unit title: Dental Fixed Prosthodontics: Precision Attachments

This part of the Unit specification is offered as guidance. The support notes are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 80 hours.

Guidance on the content and context for this Unit

The purpose of this Unit is to allow candidates to develop the knowledge and understanding required to become competent in the construction of dental fixed restorations incorporating precision attachments. The Unit will introduce candidates to the various precision attachment types used in fixed prosthodontics through tutor led sessions and practice of techniques under supervision.

Outcome 1

In this Outcome, candidates should become familiar with the types of precision attachments used in fixed prosthodontics. They will evaluate the various types of precision attachment available, highlighting the main groupings: intra-coronal; extra-coronal; stud and bar. In doing so the candidates should compare the function and positioning of each attachment type.

Candidates could explore the various types of attachment detailing their specifications:

Type: Anchors
Specifications: Cylindrical friction-grip anchors
Cylindrical retention-grip anchors
Cylindrical screw-retained anchors

Type: Resilience Anchors
Specifications: Cylindrical anchors with vertical resilience
Spherical anchors with vertical resilience and rotation

Type: Resilience Joints
Specifications: Uni- and bilateral resilience joints (spherical joints)

Type: Slide Attachments
Specifications: Intracoronal non-adjustable slide attachments
Intracoronal adjustable slide attachments
Extracoronal adjustable slide attachments
Intracoronal screw-retained slide attachments
Extracoronal screw-retained slide attachments

Type: Hinges
Specifications: Unilateral hinges with rotation
Uni- and bilateral hinges (spherical joints)

Type: Transverse Locks
Specifications: Rigid transverse locks

Higher National Unit specification: support notes (cont)

Unit title: Dental Fixed Prosthodontics: Precision Attachments

The candidate should highlight the indications and contra-indications associated with each precision attachment type.

Outcome 2

In this Outcome candidates will construct one 3-Unit anterior sited dental bridge incorporating an intra-coronal precision attachment, with the matrix, retainers and patrix positioned accurately; one 3-Unit posterior sited dental bridge incorporating an intra-coronal precision attachment, with the matrix, retainers and patrix positioned accurately; and two dental crowns or one dental bridge incorporating an extra-coronal precision attachment, with the matrix, retainers and patrix elements positioned accurately. The centre has the flexibility to select any suitable options or, where possible, could let the candidate select which option to construct. This may depend on resources available. All appliances should be finished accurately for delivery.

Guidance on the delivery and assessment of this Unit

This Unit is likely to form part of a Group Award designed to provide candidates with technical and professional knowledge and skills for employment within a dental technology environment. It is envisaged that the teaching of this Unit could be delivered through lecturer-mediated discussion, practical demonstrations, reading of recommended texts and professional peer-review journals.

This Unit offers the opportunity to introduce the candidates to self and peer assessment as a formative assessment method. Such an initiative as well as providing both the candidate and the centre with an indication of candidate progress will also help in the development of the candidate's critical skills. A possible example would be to ask the candidates to develop quality criteria for the fixed prosthodontic restorations incorporating the precision attachments being constructed in Outcome 2 as a group work activity, evaluate their own performance and that of a peer against this agreed set of criteria.

Outcome 1 could be assessed by a candidate submission. Whilst the format the submission takes is left to the discretion of the centre the author would recommend that such a submission be the equivalent to 1,500 words (excluding appendices and diagrams). Examples of possible submission types are:

Oral Questioning

The underpinning knowledge and skills could be assessed using the form of oral questioning. The centre would need to develop a bank of suitable questions of equal reliability and validity to ensure that each candidate is assessed appropriately ensuring coverage of all underpinning knowledge. If this format is selected careful consideration is required in relation to venue, etc. The author would suggest that such a format would require to be carried out in time-controlled conditions.

Higher National Unit specification: support notes (cont)

Unit title: Dental Fixed Prosthodontics: Precision Attachments

Candidate Presentation

A candidate presentation could take the form of an oral presentation by the candidate to their peers and teaching staff. Such a submission would need time to be prepared and therefore careful consideration will need to be given as to when the assessment is given to candidates to allow time for research and preparation. The candidate may use presentation software such as PowerPoint to aid the presentation delivery but this is not essential. The candidate may opt to produce and talk to a handout supplied to the group. Using such software could give the candidate the opportunity to develop their Core Skills in *Information Technology*.

Candidate Report

A candidate report may be presented in a variety of suitable ways: oral, written or signed. The author would suggest that if a candidate report is selected as the chosen assessment format that this should have a conventional structure ie title page; table of contents; introduction; report body; conclusion(s); reference list. Such a submission would need time to be prepared and therefore careful consideration will need to be given as to when the assessment is given to candidates to allow time for research and preparation.

The assessment of Outcome 2 will be in the form of practical tasks involving the candidate in the construction of fixed prosthodontic restorations incorporating precision attachments, to a given prescription. These practical tasks should be carried out within a dental laboratory setting.

Opportunities for developing Core Skills

During the delivery of Outcome 1 candidates may have the opportunity to develop the component Written Communication of the Core Skill *Communication* at SCQF level 6. Candidates may have the opportunity to analyse and evaluate complex information from a variety of dental literature sources. The general skill that the candidate may have to complete is 'Read and understand complex written communication'.

If the candidates produce a submission for Outcome 1, they will have the opportunity to develop the component Written Communication of the Core Skill *Communication* at SCQF level 6. Candidates may have to structure their report, which could include complex vocabulary, accurately and using a logical structure. The general skill that candidates may have to complete is 'Produce well-structured written communication on complex topics'.

If the candidate produces a submission for Outcome 1 there is the opportunity for the candidate to develop the Core Skill *Information Technology* at SCQF level 6. Candidates could carry out searches of information databases whilst carrying out research for the report.

There is also the opportunity for the candidate to develop the components Planning and Organising and Reviewing and Evaluating of the Core Skill *Problem Solving* at SCQF level 6 while completing the class work of Outcome 2. In this Outcome the candidate will construct fixed prosthodontic restorations incorporating precision attachments that will require the candidate to organise, plan and review the procedures involved in the task.

Higher National Unit specification: support notes (cont)

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There is the opportunity for the candidate to develop the component Critical Thinking of the Core Skill *Problem Solving* at SCQF level 6 while completing the Evidence Requirements for Outcome 1. The candidate may be required to analyse and evaluate complex information, explaining the use and types of complex partial denture design. The general skill that candidates may have to complete is 'Analyse a complex situation or issue'.

There is the opportunity to develop the component Using Graphical Information of the Core Skill *Numeracy* at SCQF level 6. When constructing the complex removable partial dentures in Outcome 2 candidates will have to interpret complex data presented in graphical form from numerous dental material manufacturers. The general skill that candidates may have to complete is 'Apply a wide range of graphical skills to interpret and present complex information in generalised contexts'.

Open learning

This Unit could be delivered by distance learning, which may incorporate some degree of online support. With regard to assessment, planning would be required by the centre to ensure the sufficiency and authenticity of the candidate evidence. Outcome 2 requires to be assessed within a dental laboratory setting.

Candidates with disabilities and/or additional support needs

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments, or considering alternative Outcomes for Units. Further advice can be found in the SQA document *Guidance on Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs* (www.sqa.org.uk).

General information for candidates

Unit title: Dental Fixed Prosthodontics: Precision Attachments

This Unit is designed to develop your knowledge and skills in the construction of dental fixed restorations incorporating precision attachments. This Unit will introduce you to various types of precision attachments used in fixed prosthodontics.

The Unit has two main areas, each the subject of a separate Outcome. Firstly you will evaluate the uses and types of precision attachments used in fixed prosthodontics. In Outcome 2 you will produce three pieces of practical work involving the construction of fixed restorations incorporating precision attachments to a given clinical prescription.

The formal assessment of this Unit may consist of a submission for Outcome 1 and a practical assessment for Outcome 2. The assessment for Outcome 1 may be carried out at the end of delivery of the Unit. The practical assessment exercises should be carried out within a dental laboratory setting.

In completing the class work and assessments of this Unit you may have the opportunity to develop the component Written Communication of the Core Skill *Communication* at SCQF level 6, and the components Planning and Organising, Reviewing and Evaluating and Critical Thinking of the Core Skill *Problem Solving* at SCQF level 6 in this Unit. There are also opportunities to develop the Core Skill *Information Technology* at SCQF level 6, and the component Using Graphical Information of the Core Skill *Numeracy* at SCQF level 6, although there is no automatic certification of Core Skills or Core Skills components.