



National unit specification

General information

Unit title: Dental Fixed Restorations: an Introduction (SCQF level 6)

Unit code: HK5F 46

Superclass: PF

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Unit purpose

This unit has been designed to develop the learner's knowledge, understanding and practical skills in the production of dental fixed restorations.

Learners will examine the uses of fixed restorations and content of dental prescriptions, producing dental fixed appliances to the given prescription whilst ensuring that safe working practices are applied throughout.

This is an introductory unit, mandatory within the National Certificate in Dental Technology so is appropriate for trainee Dental Technicians.

Outcomes

On successful completion of the unit the learner will be able to:

- 1 Outline the uses of single fixed restorations.
- 2 Outline the key aspects of a dental prescription.
- 3 Produce single fixed restorations to a given prescription ensuring safe working practices at all times.

Credit points and level

2 National unit credits at SCQF level 6: (12 SCQF credit points at SCQF level 6)

National unit specification: General information (cont)

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Recommended entry to the unit

Access to this unit is at the discretion of the centre. It would be helpful if learners had successfully completed or be working towards the units: *Dental Care Professionals: Fitness to Practice*

Core Skills

Opportunities to develop aspects of Core Skills are highlighted in the support notes for this unit specification.

There is no automatic certification of Core Skills or Core Skill components in this unit.

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.

Equality and inclusion

This unit specification has been designed to ensure that there are no unnecessary barriers to learning or assessment. The individual needs of learners should be taken into account when planning learning experiences, selecting assessment methods or considering alternative evidence.

Further advice can be found on our website www.sqa.org.uk/assessmentarrangements.

National unit specification: statement of standards

Unit title: Dental Fixed Restorations: an Introduction (SCQF level 6)

Acceptable performance in this unit will be the satisfactory achievement of the standards set out in this part of the unit specification. All sections of the statement of standards are mandatory and cannot be altered without reference to SQA.

Outcome 1

Outline the uses of single fixed restorations.

Performance criteria

- (a) Describe the factors for indications for use of a fixed restoration
- (b) Describe the rationale for use of a fixed restoration

Outcome 2

Outline the key aspects of a dental prescription.

Performance criteria

- (a) Describe the range of purposes of a dental prescription
- (b) Identify the key details required on a dental prescription

Outcome 3

Produce single fixed restorations to a given prescription ensuring safe working practices at all times.

Performance criteria

- (a) Manufacture one temporary crown to the given prescription ensuring safe working practices are maintained
- (b) Manufacture one non precious metal coping to the given prescription ensuring safe working practices are maintained
- (c) Manufacture one gold shell crown maxillary 1st molar to the given prescription ensuring safe working practices are maintained
- (d) Manufacture one diagnostic wax up maxillary 1st molar upper to the given prescription ensuring safe working practices are maintained
- (e) Accurately assess the quality of the temporary crown, non-precious metal coping, gold shell crown and diagnostic wax up maxillary 1st molar produced

National unit specification: statement of standards (cont)

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Evidence requirements for this unit

Evidence is required to demonstrate that learners have achieved all outcomes and performance criteria.

Learners should be presented with real or simulated projects and given a clear brief to ensure that they have the opportunity to achieve all the performance criteria.

Evidence must be provided to show that learners can demonstrate their understanding of information, materials, terminology, practices and techniques related to the production of dental fixed restorations. Evidence must also be provided to show that learners can apply relevant knowledge and skills in a practical context.

Learners will be required to demonstrate safe working practices, including infection prevention and control during the practical aspects of delivery and assessment of this unit.

For **Outcome 1**, learners must provide evidence of the following in closed-book conditions:

- ◆ Description of a minimum of three indications for use of a fixed restoration as stated by The British Society for Restorative Dentistry
- ◆ Description of a minimum of two rationale for the use of a fixed restoration as stated by The British Society for Restorative Dentistry

For **Outcome 2**, learners must provide evidence of the following in closed-book conditions:

- ◆ Description of a minimum of three purposes of a dental prescription
- ◆ Identify the six key details required on a prescription as stated by the regulatory body, Medicines and Healthcare Products Regulatory Agency (MHRA)

Outcome 3

Product evidence must be produced under supervised conditions to show that learners can produce and accurately assess the quality of one temporary crown, one non-precious metal coping, one gold shell crown maxillary 1st molar and one diagnostic wax up maxillary 1st molar — to the given prescription ensuring:

Temporary crown

- ◆ Natural gap is maintained with soft tissue preservation
- ◆ Trimmed in relation to the arch labial, palatal, mesial, distal and incisal
- ◆ Contact points and position are achieved
- ◆ Occlusion, overjet and overbite relate to the existing relationship
- ◆ Morphology represents existing dentition
- ◆ Acrylic crown fits the die margins
- ◆ Acrylic crown is polished
- ◆ Safe use of equipment, use of Personal Protective Equipment (PPE), cleanliness and tidiness
- ◆ Accurate completion of a quality checklist

National unit specification: statement of standards (cont)

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Non precious metal coping

- ◆ Butt fit to the prepared margins.
- ◆ Correct dimensions to allow 2mm porcelain in all aspects labial, palatal, mesial, distal & occlusal.
- ◆ Sufficient collar to support the porcelain in the palatal aspect with porcelain stops mesially and distally.
- ◆ Trimmed back 0.5mm in the Labial aspect for shoulder porcelain.
- ◆ Correct thickness of metal is no less than 0.4mm, no thicker than 0.8mm
- ◆ Trimmed to create a suitable bonding surface with no sharp edges.
- ◆ Degas the coping
- ◆ Safe use of equipment, use of Personal Protective Equipment (PPE), cleanliness and tidiness
- ◆ Accurate completion of a quality checklist

Gold shell crown maxillary 1st molar

- ◆ Crown fit on the die margin in the palatal, buccal, mesial and distal aspects
- ◆ Morphology represents Maxillary 1st molar and existing dentition
- ◆ Buccal cusps and position, mesial marginal ridge visible
- ◆ Palatal cusps and position, distal marginal ridge visible
- ◆ Trimmed in relation to the arch width buccal and lingual
- ◆ Contact points and position are present
- ◆ Occlusion is maintained (vertical dimension)
- ◆ High polish no visible scratches
- ◆ Fitting surface sandblasted
- ◆ Safe use of equipment, use of Personal Protective Equipment (PPE), cleanliness and tidiness
- ◆ Accurate completion of a quality checklist

Diagnostic wax up maxillary 1st molar

- ◆ Crown fit on the die margin in the palatal, buccal, mesial and distal aspects
- ◆ Morphology represents maxillary 1st molar and existing dentition
- ◆ Buccal cusps and position, mesial marginal ridge visible
- ◆ Palatal cusps and position, distal marginal ridge visible
- ◆ Positioned in relation to the arch width buccal and lingual
- ◆ Contact points and position are present
- ◆ Occlusion is maintained (vertical dimension)
- ◆ Wax finish smooth with no visible scratches
- ◆ Fitting surface complete no gaps or wax overhangs
- ◆ Safe use of equipment, use of Personal Protective Equipment (PPE), cleanliness and tidiness
- ◆ Accurate completion of a quality checklist



National unit support notes

Unit title: Dental Fixed Restorations: an Introduction (SCQF level 6)

Unit support notes are offered as guidance and are not mandatory.

While the exact time allocated to this unit is at the discretion of the centre, the notional design length is 60 hours.

Guidance on the content and context for this unit

This introductory unit forms part of the NC in Dental Technology at SCQF level 6. This unit will develop the learner's knowledge, understanding and practical skills in the construction of Dental Fixed Restorations.

Where this unit is delivered as part of a national course it would be beneficial if learners had completed or are currently undertaking other related units from the award.

Outcome 1 provides learners with underpinning knowledge of the uses of, and the decisions to provide, fixed restorations as stated by The British Society for Restorative Dentistry.

INDICATIONS

- ◆ The motivation and aspirations of the patient.
- ◆ The oral and general health of the patient.
- ◆ The condition of the remaining teeth and tooth tissues, the periodontal condition and oral hygiene maintenance.
- ◆ Analysis of the benefits, disadvantages and long-term consequences of providing a crown or fixed prosthesis.
- ◆ Complications which limit the likelihood of clinical success.
- ◆ The skill and experience of the clinician.

RATIONALE

- ◆ To restore the form, function and appearance of teeth which are badly broken down, worn or fractured to the extent that simpler forms of restorations are contraindicated or have been found to fail in clinical service.
- ◆ To improve the form and appearance of unsightly teeth which cannot be managed by more conservative cosmetic procedures.
- ◆ To reduce the risk of fractures occurring in extensively restored teeth including endodontically treated posterior teeth.
- ◆ More rarely, to alter significantly the shape, size and inclination of teeth for cosmetic and functional purposes.
- ◆ To restore a dental implant.

National unit support notes (cont)

Unit title: Dental Fixed Restorations: an Introduction (SCQF level 6)

Outcome 2 provides learners with the required knowledge of the prescription requirements for producing a fixed restoration as stated by the regulatory body Medicines and Healthcare Products Regulatory Agency (MHRA).

- ◆ The name and address of the manufacturer.
- ◆ Data allowing identification of the device in question.
- ◆ A statement that the device is intended for exclusive use by a particular patient, together with the name of the patient.
- ◆ The name of the medical practitioner or the authorised person who made out the prescription and, where applicable, the name of the clinic concerned.
- ◆ The specific characteristics of the product as indicated by the prescription.
- ◆ A statement that the device in question conforms to the essential requirements of custom-made devices and, where applicable, indicating which essential requirements have not been fully met, together with the grounds.

Broader learning can include the reasons prescriptions are issued. The costs of carrying out required work should be explored as this provides valuable context for the workplace. Learners could be signposted to current industry laboratory pricelists.

The completion of Outcome 1 and Outcome 2 will prepare learners for the practical activities in Outcome 3.

Outcome 3 is practical and provides learners with the opportunity to develop their skills in constructing and assessing the quality of dental fixed restorations. Learners should be provided with a prescription on which to base their work and a quality checklist to complete upon completion. The importance of maintaining safe working practices and infection prevention and control should be emphasised. Centres must ensure that learners are aware of Safe Working signs and manufacturer's instructions and have access to all necessary health and safety resources, eg PPE; facemasks, laboratory coat, eye protection and gloves.

Guidance on approaches to delivery of this unit

The learning and teaching of the manufacture of dental fixed restorations is most effective when set in a relevant context, eg by making reference to the applications of the appliances in real life situations. Due to the holistic nature of course delivery there is scope for integration with other units and further information on the preferred order of delivery is provided in the group award specification.

Learning and teaching approaches should include lectures, practical demonstrations, group work and individual exercises. The practical work can be reinforced from, eg moodle and worksheets. Resources used could include examples of a temporary crown, non-precious metal coping, gold shell crown maxillary 1st molar and diagnostic wax up maxillary 1st molar and where appropriate audio visual material.

Broader informal discussions may be incorporated to clarify difficulties and it may be beneficial to discuss emerging technologies and industry constraints, eg timescales and costs

National unit support notes (cont)

Unit title: Dental Fixed Restorations: an Introduction (SCQF level 6)

Guidance on approaches to assessment of this unit

Evidence can be generated using different types of assessment. The following are suggestions only. There may be other methods that would be more suitable to learners.

Centres are reminded that prior verification of centre-devised assessments would help to ensure that the national standard is being met. Where learners experience a range of assessment methods, this helps them to develop different skills that should be transferable to work or further and higher education.

An appropriate assessment method for Outcome 1 and Outcome 2 is a range of short answer or restricted response questions set under closed-book conditions. This could be paper based assessment or e-assessment and allow for integration of assessment of knowledge from other relevant units.

Outcomes 3 may be assessed via observation of practice using an observation checklist, and the submission of a quality assurance checklist with the final products constructed. Use of observation will allow centre staff to verify that products produced are the learners own work and help authenticate evidence.

Opportunities for e-assessment

E-assessment may be appropriate for some assessments in this unit. By e-assessment we mean assessment which is supported by Information and Communication Technology (ICT), such as e-testing or the use of e-portfolios or social software. Centres which wish to use e-assessment must ensure that the national standard is applied to all learner evidence and that conditions of assessment as specified in the evidence requirements are met, regardless of the mode of gathering evidence. The most up-to-date guidance on the use of e-assessment to support SQA's qualifications is available at www.sqa.org.uk/e-assessment.

Opportunities for developing Core and other essential skills

There will be opportunities to develop aspects of the Core Skills in *Communication* (Oral and Written skills) and *Information and Communication Technology (ICT)* (Accessing Information), *Numeracy* (Graphical Information, Using Number — Measuring and Calculation), *Working with Others* (Working Co-operatively with Others) and *Problem Solving* (Critical Thinking) throughout this unit.

There may also be opportunities to develop broader transferable skills which contribute to employability:

- ◆ Time management and organisational skills — through working to deadlines, punctuality, record keeping
- ◆ Sustainability — through consideration of the use of resources, recycling and waste
- ◆ Specific technical skills — through preparing, handling, producing and assessing dental fixed restorations.
- ◆ Interpersonal skills such as listening, teamwork and study skills
- ◆ Personal development, eg self-confidence and self-motivation

History of changes to unit

Version	Description of change	Date

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General information for learners

Unit title: Dental Fixed Restorations: an Introduction (SCQF level 6)

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

If you undertake this unit, you will learn about dental prescriptions and the information you need to construct dental fixed appliances to the specification and quality required whilst ensuring safe working practices are applied throughout.

This is an introductory unit which forms part of the NC in Dental Technology and is suitable for trainee dental technicians.

There are 3 outcomes to complete:

- 1 Outline the uses of single fixed restorations.
- 2 Outline the key aspects of a dental prescription.
- 3 Produce single fixed restorations to a given prescription ensuring safe working practices at all times.

Assessment methods are varied and may include set question papers and observation of your practice.

There will be opportunities to develop aspects of the Core Skills in *Communication* (Oral and Written skills) and *Information and Communication Technology (ICT)* (Accessing Information), *Numeracy* (Graphical Information, Using Number — Measuring and Calculation), *Working with Others* (Working Co-operatively with Others) and *Problem Solving* (Critical Thinking) throughout this unit.

There may also be opportunities to develop your broader transferable skills which contribute to employability:

- ◆ Time management and organisational skills — through working to deadlines, punctuality, record keeping
- ◆ Sustainability — through consideration of the use of resources, recycling and waste
- ◆ Specific technical skills — through preparing, handling, producing and assessing appliances
- ◆ Interpersonal skills such as listening, teamwork and study skills
- ◆ Personal development, eg self-confidence and self-motivation