



Australian Government

HLTDET009 Construct crown and bridge structures

Release: 1

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Modification History

Release	Comments
Release 1	This version was released in <i>HLT Health Training Package release 3.0</i> and meets the requirements of the 2012 Standards for Training Packages. Merged HLTDT510C/HLTDT516C Significant changes to the elements and performance criteria. New evidence requirements for assessment including volume and frequency requirements. Removal of pre-requisites

Application

This unit of competency describes the skills and knowledge required to construct crown and bridge structures including inlays, veneers and substructures.

This unit applies to work in dental technology.

The skills in this unit must be applied in accordance with Commonwealth and State/Territory legislation, Australian/New Zealand Standards and industry codes of practice.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

Elements define the essential outcomes

Performance criteria describe the performance needed to demonstrate achievement of the element.

1. Prepare crown and bridge model

1.1 Pour or construct model using crown and bridge model system

1.2 Prepare crown and bridge model to appropriate height and with level occlusal plane in accordance with crown and bridge model system used

1.3 Section crown and bridge model in accordance with work order requirements

1.4 Prepare die for construction of restoration in accordance with work order

ELEMENT**PERFORMANCE CRITERIA**

Elements define the essential outcomes

Performance criteria describe the performance needed to demonstrate achievement of the element.

2. Wax and invest fixed partial dentures and structures

2.1 Wax up crown and bridge restorations

2.2 Sprue crown and bridge wax pattern and prepare for processing

2.3 Select appropriate investment material according to the material to be used

2.4 Prepare investment materials according to the manufacturers' instructions

2.5 Invest wax patterns

3. Burnout, process and finish fixed partial dentures and structures

3.1 Select burnout techniques appropriate to the investment material and restoration material

3.2 Process restoration/substructure in appropriate material

3.3 Devest restoration/substructure without damaging it

3.4 Check for defects

3.5 Trim and finish restoration while maintaining all contact areas and margins

3.6 Evaluate the finished restoration

3.7 Decontaminate the restoration according to infection control guidelines

3.8 Dry the casting, replace on model and place in a sealed container for dispatch

Foundation Skills

The Foundation Skills describe those required skills (language, literacy, numeracy and employment skills) that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

No Equivalent Unit

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ced1390f-48d9-4ab0-bd50-b015e5485705>

Assessment Requirements for HLTDET009 Construct crown and bridge structures

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Performance Evidence

The candidate must show evidence of the ability to complete tasks outlined in elements and performance criteria of this unit, manage tasks and manage contingencies in the context of the job role. There must be evidence that the candidate has:

- used standard precautions and safe work practices to design and construct 1 maxillary or mandibular anterior and posterior crown
- critically evaluated the 1 maxillary or mandibular anterior and posterior crown produced to meet technical laboratory and patient requirements.
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Knowledge Evidence

The candidate must be able to demonstrate essential knowledge required to effectively complete tasks outlined in elements and performance criteria of this unit, manage tasks and manage contingencies in the context of the work role. This includes knowledge of:

- Australian/New Zealand Standards, workplace health and safety (WHS) policies, Dental Board of Australia guidelines on infection control, Commonwealth and State/Territory legislation and organisation policies relating to dental laboratory work
- fundamental oral anatomy including:
 - dentition – arrangement of the teeth, naming and coding of teeth
 - structures of the oral cavity related to crown and bridge structures
 - teeth form and function
 - tooth preparation including basic cementation techniques of restorations
 - articulation and occlusion

- casting
- dental metallurgy
- factors responsible for casting defects
- finishing and polishing
- fundamentals of crown and bridge impressions including:
 - properties
 - types
 - techniques
 - compatibility with crown and bridge model materials
- properties of model and die materials including:
 - epoxy and polymer materials
 - gypsum materials
 - manipulation of crown and bridge model materials
- properties of crown and bridge materials:
 - casting and pressing materials
 - computer-aided design (CAD) and computer-aided manufacturing (CAM)
 - ceramic bonding materials
 - other relevant materials
- use of pattern materials including:
 - wax and plastic pattern techniques
 - emerging technology techniques
- investment and burnout including:
 - fundamental knowledge of investment materials
 - investing and expansion of the investment
 - burnout
 - waxing and spruing techniques.

Assessment Conditions

Skills must have been demonstrated in a dental laboratory workplace or in a simulated dental laboratory environment that reflects workplace laboratory conditions. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources including:
 - access to work order
 - Dental Board of Australia guidelines on infection control on which the candidate bases the planning process
 - laboratory safety manuals and procedures in line with relevant Commonwealth and State/Territory legislation
 - WHS policies on which the candidate bases the planning process.

Assessors must satisfy the Standards for Registered Training Organisations (RTOs) 2015/AQTF mandatory competency requirements for assessors.

Links

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