



Australian Government

HLTDET017 Construct dental restorations and appliances using computer-aided manufacturing (CAM)

Release: 1

HLTDET017 Construct dental restorations and appliances using computer-aided manufacturing (CAM)

Modification History

Not applicable.

Application

This unit of competency describes the skills and knowledge required to construct dental restorations and appliances using computer-aided manufacturing (CAM) technologies.

This unit applies to dental technicians working in dental laboratories.

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.

Pre-requisite Unit

Nil

Competency Field

Dental

Unit Sector

Dental technology

Elements and Performance Criteria

<i>Elements describe the essential outcomes</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine restoration or appliance requirements.	1.1 Access and review work order. 1.2 Apply standard infection control precautions when receiving, handling and working on dental materials. 1.3 Ensure accuracy of work order and seek additional information as required. 1.4 Assess quality of digital design and seek any required adjustments. 1.5 Obtain final approval of design from appropriate source. 1.6 Identify and set-up computer-aided manufacturing (CAM) technologies required to construct restoration or appliance, and ensure availability.
2. Construct restoration or	2.1 Access required computer-aided manufacturing (CAM)

appliance using computer-aided manufacturing (CAM).	software.
	2.2 Follow workplace policies and procedures to access and import digital files into computer-aided manufacturing (CAM) software.
	2.3 Select and load appropriate materials for computer-aided manufacturing (CAM) of restoration or appliance.
	2.4 Manipulate and program features of computer-aided manufacturing (CAM) technologies to construct restoration or appliance.
	2.5 Monitor construction of restoration or appliance and make any required adjustments.
3. Finalise restoration or appliance.	3.1 Inspect restoration or appliance for defects and ensure restoration or appliance accurately reflects requirements of work order.
	3.2 Make any final adjustments to ensure integrity and accuracy of restoration or appliance.
	3.3 Complete required finishing to finalise restoration or appliance, as required.
	3.4 Finalise, disinfect and package restoration or appliance according to workplace requirements.

Foundation Skills

Foundation skills essential to performance in this unit, but not explicit in the performance criteria are listed below.

SKILLS	DESCRIPTION
Reading skills to:	interpret technical language within various texts.
Oral communications skills to:	pronounce complex words correctly and use them in the correct context.
Self-management skills to:	work within parameters of own scope of practice.

Unit Mapping Information

No equivalent unit.

Links

Companion Volume Implementation Guide -

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

Assessment Requirements for HLTDET017 Construct dental restorations and appliances using computer-aided manufacturing (CAM)

Modification History

Not applicable.

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:

- read and correctly interpreted four work orders
- used computer-aided manufacturing (CAM) technologies to construct four restorations or appliances, one of which must be a unit of crown and bridge work. The remaining three must be selected from two of the following categories:
 - prosthetics
 - chrome casting
 - orthodontics
 - splints
- applied standard infection control precautions and safe work practices to prepare the above four restorations or appliances
- critically evaluated the above four restorations or appliances constructed to meet technical laboratory and clinician requirements.

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 legislation and State/Territory legislation, and organisational policies relating to dental laboratory work
- requirements and organisational policies relating to dental laboratory work including:
 - use of standard infection control precautions
 - use of personal protective equipment
 - requirements for the use of computer-aided manufacturing (CAM) technologies
 - requirements for storage of digital designs
 - work health and safety
- benefits and limitations of computer-aided manufacturing (CAM) in digital dentistry

- commonly used types of computer-aided manufacturing (CAM) technologies used in the dental industry
- computer-aided manufacturing (CAM) processes and procedures as related to digital dentistry
- digital restoration and appliance file types
- types of digital restorations and appliances
- anatomical features of digital restorations, as relevant to the restoration or appliance
- properties of restoration or appliance material applicable to computer-aided manufacturing (CAM) and the applicability of each material
- surface finishing types and application
- fundamentals of oral anatomy:
 - dentition – arrangement of teeth, naming and coding of teeth
 - structures of the oral cavity – hard and soft palate, lateral and posterior borders of the oral cavity, tongue and floor of mouth
 - teeth form and function.

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:
 - access to a variety of work orders
 - digital restoration or appliance designs
 - computer-aided manufacturing (CAM) technologies commonly used within the dental industry
 - restoration or appliance materials
 - 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.

Assessors must satisfy the standards for registered training providers' requirements for assessors.

Links

Companion Volume Implementation Guide -

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