



**Australian Government**

# **MEM31719 Certificate III in Engineering - Casting and Moulding Trade**

**Release 3**

# MEM31719 Certificate III in Engineering - Casting and Moulding Trade

## Modification History

Release 3. Elective units updated. Supersedes and is equivalent to MEM31719 Certificate III in Engineering - Casting and Moulding Trade (Release 2).

Release 2. Mandatory training contract pathway added.

Release 1. New qualification. Supersedes but is not equivalent to MEM30305 Certificate III in Engineering – Fabrication Trade.

## Qualification Description

This qualification defines the skills and knowledge required of an engineering tradesperson - casting and moulding within the metal, engineering, manufacturing and associated industries. The qualification has been specifically developed for apprentices in the above trade.

This qualification must be undertaken through a Training Contract or through formal trade recognition assessment processes.

The skills associated with this qualification are intended to apply to a wide range of casting and moulding work, including producing sand moulds by hand or using moulding machines, pouring and trimming castings and operating and monitoring melting furnaces.

This qualification is designed to provide an industry recognised skills profile related to trade work as a casting and moulding tradesperson.

Assessment of some units of competency must, where indicated, include evidence of the candidate's performance in a functioning workplace where there is a sufficient range of appropriate tasks and materials to cover the scope of application of those units. All outcomes must reflect the standard of performance inherent in the job.

No licensing, legislative or certification requirements apply to this qualification at the time of publication. However, in some jurisdictions units in this qualification may require a license or relate to regulatory requirements. Licensing and regulatory information is included in the relevant units of competence.

## Entry Requirements

There are no entry requirements for this qualification.

## Packaging Rules

To be awarded the MEM31719 Certificate III in Engineering – Casting and Moulding Trade, units of competency to the value of 96 points must be achieved, chosen as outlined below:

- core units of competency listed below (totalling 33 points)
- elective units of competency to a minimum value of 40 points from Group A

- elective units of competency to a maximum value of 23 points from Group B to bring the total value to 96 points.

Appropriate Group B elective units to the value of 8 points may be chosen from this Training Package, other endorsed Training Packages and accredited courses where those units are available for inclusion at Certificate III. Only select units that would be suitable for occupational outcomes in a casting and moulding trade environment.

Registered Training Organisations (RTOs) must seek a determination from the industry parties in respect of the allocation of points values for units of competency drawn from other Training Packages or accredited courses. Determination of points requests are to be submitted to the industry parties through Innovation and Business Skills Australia (IBSA) Manufacturing. Refer to the MEM Companion Volume Implementation Guide for information on determination of unit points values.

#### Prerequisites

Points associated with prerequisites count towards the total. Units with prerequisite requirements are marked with an asterisk (refer to the individual units for details). All prerequisites are included in the qualification

#### Core units of competency

Unit code	Unit title	P	Pre req
MEM09002	Interpret technical drawing	4	*
MEM11011	Undertake manual handling	2	*
MEM12023	Perform engineering measurements	5	*
MEM12024	Perform computations	3	*
MEM13015	Work safely and effectively in manufacturing and engineering	2	
MEM14006	Plan work activities	4	*
MEM16006	Organise and communicate information	2	*
MEM16008	Interact with computing technology	2	*
MEM17003	Assist in the provision of on-the-job training	2	*
MEM18001	Use hand tools	2	*
MEM18002	Use power tools/hand held operations	2	*
MSMENV272	Participate in environmentally sustainable work practices	3	

## Elective units of competency

## Group A

Unit code	Unit title	P	Pre req
MEM04001	Operate melting furnaces	4	*
MEM04004	Prepare and mix sand for metal moulding	4	*
MEM04006	Operate sand moulding and core making machines	8	*
MEM04007	Pour molten metal	4	*
MEM04008	Fettle and trim metal castings/forgings	4	*
MEM04019	Perform refractory installation and repair	4	*
MEM04024	Produce moulds and cores by hand	4	*
MEM04025	Produce moulds and cores by hand (advanced)	12	*
MEM05007	Perform manual heating and thermal cutting	2	*
MEM07001	Perform operational maintenance of machines/equipment	2	*
MEM07024	Operate and monitor machine and process	4	*
MEM07032	Use workshop machines for basic operations	2	*
MEM13003	Work safely with industrial chemicals and materials	2	*
MEM13004	Work safely with molten metals/glass	2	*

## Group B

Unit code	Unit title	P	Pre req
MEM04002	Perform gravity die casting	2	*
MEM04003	Operate pressure die casting machine	4	*
MEM09011	Apply basic engineering design concepts	6	*
MEM11009	Handle/move bulk fluids/gases	4	*

Unit code	Unit title	P	Pre req
MEM11010	Operate mobile load shifting equipment	4	*
MEM11016	Order materials	2	*
MEM11022	Operate fixed/moveable load shifting equipment	4	*
MEM12001	Use comparison and basic measuring devices	2	*
MEM13001	Perform emergency first aid	1	*
MEM13019	Undertake work health and safety activities in the workplace	3	
MEM15004	Perform inspection	2	*
MEM16005	Operate as a team member to conduct manufacturing, engineering or related activities	2	*

## Qualification Mapping Information

Release 3. Supersedes and is equivalent to MEM31719 Certificate III in Engineering - Casting and Moulding Trade (Release 2).

Release 2. Supersedes and is equivalent to MEM31719 Certificate III in Engineering – Casting and Moulding Trade (Release 1).

Release 1. New qualification. Supersedes but is not equivalent to MEM30305 Certificate III in Engineering – Fabrication Trade.

## Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>