

**MEM30219 Certificate III in Engineering**  
**96 points are required for award of this qualification**

Unit Type	Unit Code	Unit Name	Hours	Points	Fee
Core	MEM09002	Interpret technical drawing [18] [19] [20] [22]	40	4	\$64.00
Core	MEM11011	Undertake manual handling [20] [22]	20	2	\$32.00
Core	MEM12023	Perform engineering measurements [20] [22]	30	5	\$48.00
Core	MEM12024	Perform computations [20] [22]	30	3	\$48.00
Core	MEM13015	Work safely and effectively in manufacturing and engineering	40	2	\$64.00
Core	MEM14006	Plan work activities [20] [22]	40	4	\$64.00
Core	MEM16006	Organise and communicate information [20]	20	2	\$32.00
Core	MEM16008	Interact with computing technology [20] [22]	20	2	\$32.00
Core	MEM17003	Assist in the provision of on-the-job training [20] [22]	20	2	\$32.00
Core	MEM18001	Use hand tools [16] [20] [22]	20	2	\$32.00
Core	MEM18002	Use power tools/hand held operations [16] [20] [22]	20	2	\$32.00
Core	MSMENV272	Participate in environmentally sustainable work practices	30	3	\$48.00
<b>Elective - Group A, B &amp; C</b>					
Elective - Group A, B & C	MEM05005	Carry out mechanical cutting [16] [18] [20] [22] [23]	20	2	\$32.00
Elective - Group A, B & C	MEM07005	Perform general machining [15] [16] [18] [19] [20] [21] [22] [23]	80	8	\$128.00
Elective - Group A, B & C	MEM07006	Perform lathe operations [11] [15] [16] [18] [19] [20] [21] [22] [23]	40	4	\$64.00
Elective - Group A & C	MEM07007	Perform milling operations [11] [15] [16] [18] [19] [20] [21] [22] [23]	40	4	\$64.00
Elective - Group A & C	MEM07008	Perform grinding operations [11] [15] [16] [18] [19] [20] [21] [22] [23]	40	4	\$64.00
Elective - Group A	MEM07011	Perform complex milling operations [11] [13] [15] [16] [17] [18] [19] [20] [21] [22] [23]	40	4	\$64.00
Elective - Group A & C	MEM12003	Perform precision mechanical measurement [16] [18] [20] [22]	20	2	\$32.00
Elective - Group A, B, & C	MEM12006	Mark off/out (general engineering) [15] [16] [18] [19] [20] [21] [22]	40	4	\$64.00
Elective - Group A, B, C	MEM18003	Use tools for precision work [16] [18] [20] [22] [23] [24]	40	4	\$64.00
Elective - Group B	MEM18004	Maintain and overhaul mechanical equipment [15] [16] [18] [19] [20] [21] [22] [23] [24] [25] [26] [27] [28] [29] [30] [32]	40	4	\$64.00
Elective - Group B & C	MEM18005	Perform fault diagnosis, installation and removal of bearings [15] [16] [18] [19] [20] [21] [22] [23] [24] [25] [27] [32]	40	4	\$64.00
Elective - Group B & C	MEM18006	Perform precision fitting of engineering components [15] [16] [18] [19] [20] [21] [22] [23] [24] [25] [32]	60	6	\$96.00
Elective - Group B & C	MEM18007	Maintain and repair mechanical drives and mechanical transmission assemblies [15] [16] [18] [19] [20] [21] [22] [23] [24] [25] [27] [32]	40	4	\$64.00
Elective - Group B & C	MEM18009	Perform precision levelling and alignment of machines and engineering components [15] [16] [18] [19] [20] [21] [22] [23] [24] [25] [27] [32]	40	4	\$64.00
Elective - Group B & C	MEM18012	Perform installation and removal of mechanical seals [15] [16] [18] [19] [20] [21] [22] [23] [24] [25] [27] [32]	20	2	\$32.00
Elective - Group B & C	MEM18013	Perform gland packing [16] [18] [20] [22] [23]	20	2	\$32.00
Elective - Group B & C	MEM18020	Maintain hydraulic system components [15] [16] [18] [19] [20] [21] [22] [23] [24] [25] [27] [32]	40	4	\$64.00
Elective - Group A, B & C	MEM18055	Dismantle, replace and assemble engineering components [15] [16] [18] [20] [22] [23] [24]	30	3	\$48.00
<b>Elective - Group D</b>					
Elective - Group D	MEM05004	Perform routine oxy fuel gas welding [16] [20] [22]	19	2	\$30.40
Elective - Group D	MEM05006	Perform brazing and/or silver soldering [16] [20] [22]	20	2	\$32.00

Unit Type	Unit Code	Unit Name	Hours	Points	Fee
Elective - Group D	MEM05007	Perform manual heating and thermal cutting [15] [16] [18] [20] [22]	20	2	\$32.00
Elective - Group D	MEM05012	Perform routine manual metal arc welding [16] [20] [22]	20	2	\$32.00
Elective - Group D	MEM05049	Perform routine gas tungsten arc welding [16] [20] [22]	20	2	\$32.00
Elective - Group D	MEM05050	Perform routine gas metal arc welding [16] [20] [22]	20	2	\$32.00
Elective - Group D	MEM07021	Perform complex lathe operations [11] [12] [15] [16] [17] [18] [19] [20] [21] [22] [23]	40	4	\$64.00
Elective - Group D	MEM08010	Manually finish/polish materials [16] [20] [22] [23]	60	6	\$96.00
Elective - Group D	MEM11016	Order materials [20] [22]	20	2	\$32.00
Elective - Group D	MEM13003	Work safely with industrial chemicals and materials [16] [20] [22]	20	2	\$32.00
Elective - Group D	MEM16005	Operate as a team member to conduct manufacturing, engineering or related activities [16] [20] [22]	20	2	\$32.00
Elective - Group D	MEM18011	Shut down and isolate machines/equipment [16] [20] [22]	20	2	\$32.00
Elective - Imported	MEM05056	Perform routine flux core arc welding [16] [20] [22]	20	2	\$32.00
Elective - Imported	MEM07003	Perform routine machine setting [14] [16] [18] [20] [22] [23]	40	4	\$64.00
Elective - Imported	MEM07024	Operate and monitor machine and process [16] [20] [22]	40	4	\$64.00
Elective - Imported	MEM16004	Perform internal/external customer service [20] [22]	20	2	\$32.00
Elective - Imported	MEM18021	Maintain hydraulic systems [15] [16] [18] [19] [20] [21] [22] [23] [24] [25] [27] [31] [32]	40	4	\$64.00
Elective - Imported	MEM27002	Test and repair compression ignition systems [16] [18] [20] [22] [23]	40	4	\$64.00
Elective - Imported	MEM27005	Tune diesel engines [15] [16] [18] [20] [22] [23] [24] [32] [33]	40	4	\$64.00
Elective - Imported	MEM27006	Diagnose and rectify batteries, low voltage sensors and circuits [15] [16] [18] [20] [22] [23] [24] [32]	40	8	\$64.00
Elective - Imported	MEM27009	Diagnose and rectify braking systems [15] [16] [18] [20] [22] [23] [24] [32]	40	6	\$64.00
Elective - Imported	MEM27014	Diagnose and rectify automatic transmissions [15] [16] [18] [20] [22] [23] [24] [32]	20	8	\$32.00
Elective - Imported	MEM27015	Diagnose and rectify drive line and final drives [15] [16] [18] [20] [22] [23] [24] [32]	40	4	\$64.00
Elective - Imported	MEM27017	Maintain, fault find and rectify hydraulic systems for mobile plant [15] [16] [18] [20] [22] [23] [24] [32]	60	4	\$96.00
Elective - Imported	MEM27030	Perform engine bottom-end overhaul [15] [16] [17] [18] [19] [20] [21] [22] [23] [24] [32]	40	4	\$64.00

### Full Fee

Fees are charged at \$1.60 per nominal hour for each unit of competency/module.

### Partial Fee Exemption

40 per cent of the fees are charged where the participant falls into one or more of the following exemption categories:

- The participant was or will be under 17 years of age at the end of February in the year in which training is provided, and the participant is not at school and has not completed year 12.
- The participant holds a Health Care Card or Pensioner Concession Card issued under Commonwealth law or is the partner or a dependant of a person who holds a Health Care Card or Pensioner Concession Card and is named on the card.
- The participant or their partner holds an official Commonwealth form confirming they are entitled to concessions under a Health Care or Pensioner Concession Card.
- The participant is an Aboriginal or Torres Strait Islander person as stated on the Training Notification and Enrolment Form

### Full Fee Exemption

No fees are charged where the participant falls into one or more of the following categories:

- A credit transfer applies to a unit of competency/module
- The participant is a school-based apprentice or trainee
- The participant is under 25 years of age at the commencement of their apprenticeship/traineeship

To be awarded the MEM30219 Certificate III in Engineering - **Mechanical Trade**, units of competency to the value of 96 points must be achieved, chosen as outlined below:

Core units of competency (totalling 33 points)

Elective units of competency to a minimum value of 40 points from Groups A, B and C electives

Elective units of competency to a maximum value of 23 points from Group D to bring the total value to 96 points.

To be awarded the MEM30219 Certificate III in Engineering - **Mechanical Trade (Fitting)**, units of competency to the value of 96 points must be achieved, chosen as outlined below:

Core units of competency (totalling 33 points)

Elective units of competency to a minimum value of 40 points from Group B electives

Elective units of competency to a maximum value of 23 points from Group D to bring the total value to 96 points.

To be awarded the MEM30219 Certificate III in Engineering - **Mechanical Trade (Fitting/machining)**, units of competency to the value of 96 points must be achieved, chosen as outlined below:

Core units of competency (totalling 33 points)

Elective units of competency to a minimum value of 40 points from Group C electives

Elective units of competency to a maximum value of 23 points from Group D to bring the total value to 96 points.

Note: Appropriate Group D 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. (Imported Elective Units)

## Prerequisites

- [1] Where this symbol is next to a unit name then “MEM05005 Carry out mechanical cutting” is a pre-requisite
  - [2] Where this symbol is next to a unit name then “MEM05007 Perform manual heating and thermal cutting” is a pre-requisite
  - [3] Where this symbol is next to a unit name then “MEM05011 Assemble fabricated components” is a pre-requisite
  - [4] Where this symbol is next to a unit name then “MEM05012 Perform routine manual metal arc welding” is a pre-requisite
  - [5] Where this symbol is next to a unit name then “MEM05037 Perform geometric development” is a pre-requisite
  - [6] Where this symbol is next to a unit name then “MEM05049 Perform routine gas tungsten arc welding” is a pre-requisite
  - [7] Where this symbol is next to a unit name then “MEM05050 Perform routine gas metal arc welding” is a pre-requisite
  - [8] Where this symbol is next to a unit name then “MEM05051 Select welding processes” is a pre-requisite
  - [9] Where this symbol is next to a unit name then “MEM05052 Apply safe welding practices” is a pre-requisite
  - [10] Where this symbol is next to a unit name then “MEM05056 Perform routine flux core arc welding” is a pre-requisite
  - [11] Where this symbol is next to a unit name then “MEM07005 Perform general machining” is a pre-requisite
  - [12] Where this symbol is next to a unit name then “MEM07006 Perform lathe operations” is a pre-requisite
  - [13] Where this symbol is next to a unit name then “MEM07007 Perform milling operations” is a pre-requisite
  - [14] Where this symbol is next to a unit name then “MEM07024 Operate and monitor machine and process” is a pre-requisite
  - [15] Where this symbol is next to a unit name then “MEM09002 Interpret technical drawing” is a pre-requisite
  - [16] Where this symbol is next to a unit name then “MEM11011 Undertake manual handling” is a pre-requisite
  - [17] Where this symbol is next to a unit name then “MEM12003 Perform precision mechanical measurement” is a pre-requisite
  - [18] Where this symbol is next to a unit name then “MEM12023 Perform engineering measurements” is a pre-requisite
  - [19] Where this symbol is next to a unit name then “MEM12024 Perform computations” is a pre-requisite
  - [20] Where this symbol is next to a unit name then “MEM13015 Work safely and effectively in manufacturing and engineering” is a pre-requisite
  - [21] Where this symbol is next to a unit name then “MEM14006 Plan work activities” is a pre-requisite
  - [22] Where this symbol is next to a unit name then “MEM16006 Organise and communicate information” is a pre-requisite
  - [23] Where this symbol is next to a unit name then “MEM18001 Use hand tools” is a pre-requisite
  - [24] Where this symbol is next to a unit name then “MEM18002 Use power tools/hand held operations” is a pre-requisite
  - [25] Where this symbol is next to a unit name then “MEM18003 Use tools for precision work” is a pre-requisite
  - [26] Where this symbol is next to a unit name then “MEM18005 Perform fault diagnosis, installation and removal of bearings” is a pre-requisite
  - [27] Where this symbol is next to a unit name then “MEM18006 Perform precision fitting of engineering components” is a pre-requisite
  - [28] Where this symbol is next to a unit name then “MEM18007 Maintain and repair mechanical drives and mechanical transmission assemblies” is a pre-requisite
  - [29] Where this symbol is next to a unit name then “MEM18009 Perform precision levelling and alignment of machines and engineering components” is a pre-requisite
  - [30] Where this symbol is next to a unit name then “MEM18011 Shut down and isolate machines/equipment” is a pre-requisite
  - [31] Where this symbol is next to a unit name then “MEM18020 Maintain hydraulic components” is a pre-requisite
  - [32] Where this symbol is next to a unit name then “MEM18055 Dismantle, replace and assemble engineering components” is a pre-requisite
  - [33] Where this symbol is next to a unit name then “MEM27002 Test and repair compression ignition systems” is a pre-requisite
  - [34] Where this symbol is next to a unit name then “MEM27006 Diagnose and rectify batteries, low voltage sensors and circuits” is a pre-requisite
  - [35] Where this symbol is next to a unit name then “MEM27023 Diagnose and rectify fieldbus circuits in mobile and stationary plant and equipment” is a pre-requisite
- [A] Where this symbol is next to a unit name then at least one of the following, including their prerequisites, are pre-requisites:
- “MEM05015 Weld using manual metal arc welding process”
  - “MEM05017 Weld using gas metal arc welding process”
  - “MEM05019 Weld using gas tungsten arc welding process”
  - “MEM05055 Weld using oxy fuel gas welding process”
- [B] Where this symbol is next to a unit name then at least one of the following, including their prerequisites, are pre-requisites:
- “MEM0515 Weld using manual metal arc welding process”
  - “MEM05017 Weld using gas metal arc welding process”
  - “MEM05019 Weld using gas tungsten arc welding process”
  - “MEM05047 Weld using flux core arc welding process”
  - “MEM05055 Weld using oxy fuel gas welding process”

## Application

[C] Where this symbol is next to a unit name then this unit can only be selected in conjunction with one or more of the following units:

“MEM05015 Weld using manual metal arc welding process”

“MEM05017 Weld using gas metal arc welding process”

“MEM05019 Weld using gas tungsten arc welding process”

“MEM05023 Weld using submerged arc welding process”

“MEM05047 Weld using flux core arc welding process”

“MEM05055 Weld using oxy fuel gas welding process”