

Metal Machinist

(ANZSCO: 323214)



Job description

Metal machinists operate the equipment and machinery that is used to create metal tools and parts. They set up, maintain and operate the machines that cut and shape metal stock and castings, forming intricate, exact parts. They refer to detailed drawings and computer-aided design (CAD) systems to obtain the specifications for the job, calculate dimensions, measure and mark the metal and undertake the machine processes that create exact parts.

They may also perform heat treatment processes on metals. Metal machinists work mostly in the metro area and in larger regional centres, creating parts for machines that are used in everything from mining to manufacturing and food production.

Metal machinists use computer numerical control (CNC) machines, drilling, turning, boring, plating and milling machines, lathes and other hand tools. They work with metals such as brass and steel. They may also operate welding or brazing equipment, as well as precise measuring equipment that ensures accuracy and precision. Metal machinists need to wear safety gear such as goggles, gloves, boots and protective clothing.

The qualification relevant to this job is [MEM30205 Certificate III in Engineering – Mechanical Trade](#).

How will I be assessed?

Assessment is conducted in two stages:

Documentary Evidence Assessment:

We will review your training and employment evidence to ensure you have:

- with no formal training – five years work experience.
- with formal training – three years work experience
- the range of skills and knowledge required by a Metal Machinist.

Your experience may include time spent in workplace-based training, up to a maximum of 12 months.

Your evidence must show you have worked in your occupation for at least 12 months within the last 3 years.

[For more information on the documents required for Documentary Evidence Assessment Stage, see the Evidence Guide on our website.](#)

Technical Interview:

If you are successful in Documentary Evidence Assessment, an assessor will assess you via a technical interview.

The technical interview will be conducted in English and no interpreters are allowed.

[For more information on Technical Interview, see the Technical Interview Guide on our website.](#)

What skills and knowledge do I need?

To be awarded the qualification [MEM30205 Certificate III in Engineering - Mechanical Trade](#), you must demonstrate your skill and knowledge in a number of units of competency. Each unit of competency defines a selection of knowledge and skill required in Australian workplaces.

You must demonstrate competency in **all core** units and demonstrate competency in additional units to a total of **at least 73 points** (the number of points relating to each unit is shown in last column).

	Code	Title	Core/ Elective	Weighting Points	Pre-requisites
1	MEM12023A	Perform engineering measurements	Core		
2	MEM12024A	Perform computations	Core		
3	MEM13014A	Apply principles of occupational health and safety in the work environment	Core		
4	MEM14004A	Plan to undertake a routine task	Core		
5	MEM14005A	Plan a complete activity	Core		
6	MEM15002A	Apply quality systems	Core		
7	MEM15024A	Apply quality procedures	Core		
8	MEM16006A	Organise and communicate information	Core		
9	MEM16007A	Work with others in a manufacturing, engineering or related environment	Core		
10	MEM16008A	Interact with computing technology	Core		
11	MEM17003A	Assist in the provision of on the job training	Core		
12	MSAENV272B	Participate in environmentally sustainable work practices	Core		
13	MEM07004B	Perform machine setting (complex)	E/A	8	MEM07005C MEM07006C MEM09002B MEM12023A MEM16006A MEM18001C
14	MEM07005C	Perform general machining	E/A	8	MEM09002B MEM12023A MEM18001C
15	MEM07006C	Perform lathe operations	E/A	4	MEM07005C MEM09002B MEM12023A MEM18001C
16	MEM07007C	Perform milling operations	E/A	4	MEM07005C MEM09002B MEM12023A MEM18001C

17	MEM07008D	Perform grinding operations	E/A	4	MEM07005C MEM09002B MEM12023A MEM18001C
18	MEM07011B	Perform complex milling operations	E/A	4	MEM07005C MEM07007C MEM09002B MEM12003B MEM12023A MEM12024A MEM18001C
19	MEM07013B	Perform machining operations using horizontal and/or vertical boring machines	E/A	4	MEM07005C MEM09002B MEM12023A MEM18001C
20	MEM07015B	Set computer-controlled machines/processes	E/A	2	MEM07005C MEM07024B MEM07028B MEM09002B MEM12023A MEM18001C
21	MEM07016C	Set and edit computer-controlled machines/processes	E/A	4	MEM07005C MEM07015B MEM07024B MEM07028B MEM09002B MEM12023A MEM18001C
22	MEM07018C	Write basic NC/CNC programs	E/A	4	MEM07005C MEM07015B MEM07016C MEM07024B MEM07028B MEM09002B MEM12023A MEM18001C
23	MEM07019C	Program NC/CNC machining centre	E/A	2	MEM07005C MEM07015B MEM07016C MEM07018C MEM07024B MEM07028B MEM09002B MEM12023A MEM18001C
24	MEM07020C	Program multiple spindle and/or multiple axis NC/CNC machining centre	E/A	2	MEM07005C MEM07015B MEM07016C MEM07018C MEM07019C MEM07024B MEM07028B MEM09002B MEM12023A MEM18001C

25	MEM07021B	Perform complex lathe operations	E/A	4	MEM07005C MEM07006C MEM09002B MEM12003B MEM12023A MEM12024A MEM18001C
26	MEM07024B	Operate and monitor machine/process	E/A	4	NIL
27	MEM07028B	Operate computer-controlled machines/processes	E/A	2	MEM07024B
28	MEM07029B	Perform routine sharpening/maintenance of production tools and cutters	E/A	4	MEM12023A MEM18001C
29	MEM09002B	Interpret technical drawing	E/A	4	Nil
30	MEM12003B	Perform precision mechanical measurement	E/A	2	MEM12023A
31	MEM12006C	Mark off/out (general engineering)	E/A	4	MEM09002B MEM12023A
32	MEM18001C	Use hand tools	E/A	2	Nil
33	MEM18002B	Use power tools/hand held operations	E/A	2	Nil
34	MEM18003C	Use tools for precision work	E/A	4	MEM12023A MEM18001C MEM18002B
35	MEM18005B	Perform fault diagnosis, installation and removal of bearings	E/A	4	MEM09002B MEM18001C MEM18002B MEM18003C MEM18006C MEM18055B MEM12023A
36	MEM18006C	Repair and fit engineering components	E/A	6	MEM09002B MEM12023A MEM18001C MEM18002B MEM18003C MEM18055B
37	MEM18008B	Balance equipment	E/A	2	MEM09002B MEM12023A MEM18001C MEM18002B MEM18003C MEM18006C MEM18055B
38	MEM18009B	Perform levelling and alignment of machines and engineering components	E/A	4	MEM09002B MEM12023A MEM18001C MEM18002B MEM18003C MEM18006C MEM18055B

39	MEM18011C	Shut down and isolate machines/equipment	E/A	2	Nil
40	MEM18055B	Dismantle, replace and assemble engineering components	E/A	3	MEM09002B MEM12023A MEM18001C MEM18002B
41	MEM05005B	Carry out mechanical cutting	E/B	2	MEM12023A MEM18001C
42	MEM11010B	Operate mobile load shifting equipment	E/B	4	Nil
43	MEM11011B	Undertake manual handling	E/B	2	Nil
44	MEM12001B	Use comparison and basic measuring devices	E/B	2	Nil
45	MEM07014B	Perform electro-discharge (EDM) machining operations	E/B	2	MEM07005C MEM09002B MEM12023A MEM18001C
TOTAL Weighting Points – Group A & Group B				73	

What can I expect to be asked at the Technical Interview?

- Write answers to Workplace Health and Safety (WHS) questions, environment questions and complete a Job Safety Analysis (JSA).
- Complete a number of drawings and marking out exercises, identifying welding symbols and calculate tolerances
- Complete a number of welds using MMAW, GMAW, TIG, and FCAW
- Clean, test and modify welds

What programs does this assessment fall under?

This assessment comes under the following programs and regions:

OSAP (Europe & All states of Australia)

TRS (All states of Australia)

TSS (Europe & All states of Australia)

What will I receive after the interview?

If you **successfully** complete the Technical Interview you will receive the following:

- an Australian Certificate III qualification and a Statement of Results
- a migration outcome letter if the assessment is to support your visa application.

If you are **unsuccessful** in Technical Interview you will receive:

- a Statement of Attainment that lists the units of competency you successfully achieved
- a Statement of Results that lists units of competency you have successfully achieved and those that were not achieved.

Where can I find more information?

Please refer to our website: <https://www.atc.org.au/trades-recognition/> 

Any queries may be directed to:

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