



**Australian Government**

# **Assessment Requirements for MEM07018**

## **Write basic NC and CNC programs**

**Release: 2**

# Assessment Requirements for MEM07018 Write basic NC and CNC programs

## Modification History

Release 2. Quantum of hours of workplace practice removed. Supersedes and is equivalent to MEM07018 Write basic NC and CNC programs (Release 1).

Release 1. Supersedes and is equivalent to MEM07018C Write basic NC/CNC programs.

## Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria on at least two (2) occasions and include:

- following work instructions, standard operating procedures (SOPs) and safe work practices
- identifying and interpreting specifications, charts, lists, drawings and other applicable reference documents in writing basic numerically controlled (NC) and computer numerically controlled (CNC) programs
- calculating coordinates for tooling and producing operation sheets for the program and process
- writing NC and CNC machine programs using standard code format
- producing NC/CNC operation sheets
- operating the machine to test it operates to specification undertaking any required editing of the program
- checking parts or products for conformance to specifications.

## Knowledge Evidence

Evidence required to demonstrate the required knowledge for this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include knowledge of:

- safe work practices and procedures and use of personal protective equipment (PPE)
- elements of a basic NC and CNC program and the function of elements in controlling the operation of NC and CNC machine
- machining operations
- types of NC and CNC machines and their applications
- machining operations controlled by program
- tool paths to be followed when producing a part or product
- sequence of machining operations and the reasons for selecting tool paths and sequence of operations
- purpose of the zero point of the NC and CNC machine
- standard codes and procedures for writing used in NC and CNC programs and their applications

- procedures for completing NC and CNC operation sheets and the information to be included in NC and CNC operation sheets
- procedures for manual operation of the NC and CNC machine
- reasons for testing and proving the NC and CNC program
- procedures for editing the NC and CNC program via the machine controller and the effects of editing on the operation of the NC and CNC machine and the part or product to be produced
- measuring equipment/techniques used to check for conformance to specification.

## Assessment Conditions

- Assessors must:
  - have vocational competency in writing basic NC and CNC programs at least to the level being assessed with relevant industry knowledge and experience
  - satisfy the assessor requirements in the *Standards for Registered Training Organisations 2015* or its replacement and comply with the *National Vocational Education and Training Regulator Act 2011*, its replacement or equivalent legislation covering VET regulation in a non-referring state/territory as the case requires.
- Assessment must occur in a functioning workplace. Where assessment in the workplace would be unsafe, impractical or threatens the environment, assessment must occur in a sufficiently rigorous simulated environment that reflects the circumstances that would be experienced in a functioning workplace. Assessment must cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills.
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications.
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

## Links

Companion Volume implementation guides are found in VETNet -

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