



Australian Government

Assessment Requirements for MEM07039

Write programs for industrial robots

Release: 1

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Modification History

Release 1. Supersedes and is equivalent to MEM07039A Write programs for industrial robots

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, engineering drawings and other applicable reference documents to write programs for industrial robots
- identifying required robot operations in determining programming requirements
- planning the programming methodology appropriate to the robot type and operation
- calculating coordinates of all relevant points on the part or product to be produced
- writing the robot program in the correct programming language and drafting a robot operation sheet
- trialling the program ensuring the robot operates safely and correctly and produces work that meets specification
- editing the program as necessary to ensure compliance with specifications
- undertaking program storage and filing procedures.

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)
- classifications/applications of industrial robots, including:
 - welding
 - thermal cutting
 - machining
 - forming and shaping
 - pick and place
 - palletising
 - machine loading/unloading
- end effectors, including:
 - grippers
 - tools and tool changes

- features and specifications of robots and components
- joint movements of a robot
- drive systems used to generate robot movement
- robot programming methods and procedures
- function of elements in controlling operation of a robot
- safety features and requirements of robots
- type(s) of robots and end effectors and their applications
- robot operations controlled by programs
- tool path(s) when producing a part or product
- sequence of robot operations, including movements
- zero point of the robot
- standard codes and languages for robot programs
- procedures for completing robot operation sheets
- procedures for manual operation of the robot
- reasons for testing and proving the robot program
- procedures for editing the robot program
- effects of editing on the operation of the robot 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 programs for industrial robots 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
- Where possible assessment must occur in operational workplace situations. Where this is not possible or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment that reflects realistic operational workplace conditions. This must cover all aspects of workplace performance, including environment, 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>

