



Australian Government

MSM40116 Certificate IV in Process Manufacturing

Release 7

MSM40116 Certificate IV in Process Manufacturing

Modification History

Release 7. Update to first aid elective unit. Equivalent.

Release 6. Two low use units removed from elective bank as determined at December 2020 AISC meeting in response to Skills Ministers' objectives. Equivalent.

Release 5. Imported units updated to current versions. Equivalent.

Release 4. Minor adjustment to elective units. Equivalent.

Release 3. Imported units updated to current versions. Equivalent.

Release 2. Duplicated information re importation allowance removed. Imported units updated to current versions. Equivalent.

Release 1. Supersedes and is equivalent to MSA40311 Certificate IV in Process Manufacturing. Units updated.

Qualification Description

The MSM40116 Certificate IV in Process Manufacturing provides the competencies required by advanced production workers who use a range of equipment and are involved in solving complex problems that require theoretical knowledge, combined with an understanding of operating procedures directly related to producing products.

This qualification is typically used to develop employees performing a technical role that includes the ability to work independently and conduct technical problem solving according to the needs of the work required to produce products.

This qualification is designed to develop employees who operate across more than one category within process manufacturing or other product conversion processes in manufacturing. Typical applications would be in chemical, hydrocarbons, refining, minerals processing, plastics, rubber, cabling, manufactured mineral products, and other areas as appropriate.

Non-technical team leaders, coordinators and supervisors may be better served by a qualification in competitive manufacturing. Qualification pathways from this qualification include MSM50316 Diploma of Production Management and MSS50312 Diploma of Competitive Systems and Practices.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To be awarded the MSM40116 Certificate IV in Process Manufacturing competency must be achieved in a total of **twenty-six (26)** units of competency.

- **five (5)** core units of competency

- **twenty-one (21)** elective units of competency, as specified below:
 - a minimum of **four (4)** units from **Group A**
 - the balance of units, to a maximum of **seventeen (17)** may be selected from Groups A, B and C (with a maximum of **eleven (11)** units from Group C).

Note: Up to **nine (9)** elective units may be selected from this Training Package, other endorsed Training Packages and accredited courses, as specified below.

Note: Where prerequisite units are identified they must be counted in the total number of units required for achievement of the qualification.

Core units

| Unit code | Unit title | |
|-------------------------------|--|---------------|
| MSMENV272 | Participate in environmentally sustainable work practices | |
| MSMSUP200 | Achieve work outcomes | |
| MSMSUP210 | Process and record information | |
| MSMWHS200 | Work safely | |
| MSS402051 | Apply quality standards | |
| ELECTIVE UNITS | | |
| Group A Elective units | | |
| Unit code | Unit title | Prerequisites |
| MEM15001B | Perform basic statistical quality control | |
| MSL974019 | Perform chemical tests and procedures | |
| MSMENV472 | Implement and monitor environmentally sustainable work practices | |
| MSMOPS400 | Optimise process/plant area | |

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| MSMOPS401 | Trial new process or product | |
| MSMPER400 | Coordinate permit process | MSMPER300 |
| MSMSUP400 | Develop and monitor quality systems | |
| MSMSUP404 | Coordinate maintenance | |
| MSMSUP405 | Identify problems in fluid power system | |
| MSMSUP406 | Identify faults in electronic control | |
| MSMWHS400 | Contribute to WHS management system | |
| MSMWHS401 | Assess risk | |
| MSS403085 | Ensure process improvements are sustained | |
| MSS403010 | Facilitate change in an organisation implementing competitive systems and practices | |
| MSS403011 | Facilitate implementation of competitive systems and practices | |
| MSS405013 | Facilitate holistic culture improvement in an organisation | |
| MSS403021 | Facilitate a Just in Time system | |
| MSS403086 | Improve cost factors in work practices | |
| MSS403040 | Facilitate and improve implementation of 5S | |
| MSS403054 | Facilitate breakthrough improvements | |
| MSS403087 | Mistake proof an operational process | |
| MSS404084 | Undertake process capability improvements | MSS404054 |
| MSS404054 | Apply statistics to operational processes | |
| MSS404060 | Facilitate the use of planning software systems in a work area or team | |
| MSS404085 | Undertake proactive maintenance analyses | |
| MSS404086 | Assist in implementing a proactive maintenance strategy | |

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| PMAWHS420 | Develop first aid procedures and manage resources | |
| PMAOMIR407 | Audit incident preparedness and established response systems | |
| PMAOMIR418 | Coordinate incident response | |
| PMAOMIR424 | Develop and maintain community relationships | |
| PMAOMIR430 | Conduct and assess incident exercises | |
| PMAOMIR444 | Develop incident containment tactics | |
| PMAOMIR449 | Monitor legal compliance obligations during incidents | |
| PMAOPS402 | Respond to abnormal process situations | |
| PMAOPS405 | Operate complex control systems | |
| PMAOPS410 | Operate remote production facilities | |
| PMAOPS411 | Manage plant shutdown and restart | |
| PMAOPS433 | Manage wells and gathering systems | |
| PMAOPS434 | Commission wells and gathering systems | |
| PMAOPS450 | Solve colour problems | |
| PMAOPS460 | Monitor and operate tailings management facilities | |
| PMASUP410 | Develop plant documentation | |
| PMASUP420 | Minimise environmental impact of process | |
| PMASUP432 | Coordinate pipeline projects | |
| PMASUP440 | Commission/recommission plant | |
| PMASUP441 | Decommission plant | |
| PMASUP444 | Plan plant preparation and isolation | |
| PMASUP445 | Participate in HAZOP studies | PMAOPS280 |
| PMBPROD430 | Trial a new die/tool | |

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| PMBPROD431 | Trial a new, advanced or complex mould | |
| PMBTECH401 | Predict polymer properties and characteristics | PMBTECH301 |
| PMBTECH402 | Set advanced or complex dies | PMBPREP304 |
| PMBTECH403 | Test fibre-composites materials and laminates | |
| PMBTECH404 | Mould chemical resistant and/or fire retardant fibre-composites | PMBPROD347 OR PMBPROD380 |
| PMBTECH405 | Repair damaged fibre-composites structures | |
| PMBTECH406 | Diagnose production equipment problems | |
| Group B Elective units | | |
| Unit code | Unit title | Prerequisites |
| MEM03001B | Perform manual production assembly | |
| MEM03006B | Set assembly stations | |
| MEM09002B | Interpret technical drawing | |
| MEM09204A | Produce basic engineering detail drawings | MEM09002B |
| MEM11005B | Pick and process order | |
| MEM11006B | Perform production packaging | |
| MEM11007B | Administer inventory procedures | |
| MEM12023A | Perform engineering measurements | |
| MEM15001B | Perform basic statistical quality control | |
| MEM15003B | Use improvement processes in team activities | |
| MEM15004B | Perform inspection | |
| MSL973013 | Perform basic tests | |
| MSMOPS301 | Treat corrosion | |
| MSMOPS363 | Organise on-site work | |

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| MSMPER300 | Issue work permits | MSMWHS201 |
| MSMSUP300 | Identify and apply process improvements | |
| MSMSUP301 | Apply HACCP to the workplace | |
| MSMSUP303 | Identify equipment faults | |
| MSMSUP309 | Maintain and organise workplace records | |
| MSMSUP310 | Contribute to the development of workplace documentation | |
| MSMSUP330 | Develop and adjust a production schedule | |
| MSMSUP382 | Provide coaching/mentoring in the workplace | |
| MSMSUP383 | Facilitate a team | |
| MSMSUP390 | Use structured problem-solving tools | |
| MSMWHS300 | Facilitate the implementation of WHS for a work group | |
| PMBPREP304 | Set a die | |
| PMBPROD347 | Produce composites using hand lamination | PMBPROD247 |
| PMBPROD380 | Produce composites using chopper gun/depositor | PMBPROD280 |
| PMBTECH301 | Use material and process knowledge to solve problems | |
| TAEDEL301 | Provide work skill instruction | |

Group B units may also be chosen from the Group A and Group B units in the PMA and PMB Certificates III and Group A and Group B1 units in the PMC Certificate III.

A maximum of **four (4)** relevant units may be selected from this Training Package, other endorsed Training Packages and accredited courses, where those units are packaged in a Certificate III or IV.

Group C Elective units

| Unit code | Unit title | Prerequisites |
|------------------|---|----------------------|
| FWPCOT2238 | Cut materials with a hand-held chainsaw | |
| HLTAID011 | Provide first aid | |
| MSTGN3009 | Coordinate work of team or section | |
| MEM13003B | Work safely with industrial chemicals and materials | |
| MEM16006A | Organise and communicate information | |
| MEM16007A | Work with others in a manufacturing, engineering or related environment | |
| MEM16008A | Interact with computing technology | |
| MEM18001C | Use hand tools | |
| MEM18002B | Use power tools/hand held operations | |
| MSMENV172 | Identify and minimise environmental hazards | |
| MSMOPS100 | Use equipment | |
| MSMOPS101 | Make measurements | |
| MSMOPS102 | Perform tasks to support production | |
| MSMOPS200 | Operate equipment | |
| MSMOPS212 | Use organisation computers or data systems | |
| MSMOPS244 | Lay out and cut materials | |
| MSMPER200 | Work in accordance with an issued permit | |
| MSMPER201 | Monitor and control work permits | |

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| MSMPER202 | Observe permit work | |
| MSMPER205 | Enter confined space | MSMPER200 |
| MSMSUP100 | Apply workplace context to own job | |
| MSMSUP101 | Clean workplace or equipment | |
| MSMSUP106 | Work in a team | |
| MSMSUP204 | Pack products or materials | |
| MSMSUP205 | Transfer loads | |
| MSMSUP230 | Monitor process operations | |
| MSMSUP240 | Undertake minor maintenance | |
| MSMSUP273 | Handle goods | |
| MSMSUP280 | Manage conflict at work | |
| MSMSUP291 | Participate in continuous improvement | |
| MSMSUP292 | Sample and test materials and product | |
| MSMWHS100 | Follow WHS procedures | |
| MSMWHS110 | Follow emergency response procedures | |
| MSMWHS201 | Conduct hazard analysis | |
| MSMWHS205 | Control minor incidents | |
| MSMWHS210 | Undertake first response to non-fire incidents | |
| MSMWHS212 | Undertake first response to fire incidents | |
| MSMWHS216 | Operate breathing apparatus | |
| MSMWHS217 | Gas test atmospheres | |
| MSMWHS218 | Control the risks of falls | |
| MSS402002 | Sustain process improvements | |
| MSS402020 | Apply quick changeover procedures | |
| MSS402021 | Apply Just in Time procedures | |

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| MSS402082 | Apply cost factors to work practices | |
| MSS402040 | Apply 5S procedures | |
| MSS402050 | Monitor process capability | |
| MSS402083 | Use planning software systems in operations | |
| MSS402080 | Undertake root cause analysis | |
| PMAOPS280 | Interpret process plant schematics | |
| PMBHAN103 | Shift materials safely by hand | |
| PMBPROD247 | Hand lay up composites | |
| PMBPROD280 | Operate resin-glass depositor equipment | |
| TLID2010 | Operate a forklift | |
| <p>Group C units may also be chosen from the Group C units in the PMA and PMB Certificates III and Group B2 units in the PMC Certificate III.</p> <p>A maximum of three (3) relevant units may be selected from this Training Package, other endorsed Training Packages and accredited courses, where they are packaged in a Certificate II, III or IV.</p> | | |

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Links

Companion Volume Implementation Guides are available at VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=d1287d36-dff4-4e9f-ad2c-9d6270054027>