



Australian Government

MSA40311 Certificate IV in Process Manufacturing

Release 4

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Modification History

Release 4 - Imported elective units updated to current releases.

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

Release 2 - MSACM units replaced by MSS units from MSS11v2 Sustainability Training Package. Imported unit version code updated.

Release 1 - New qualification

Description

This qualification covers the skills and knowledge required to perform a range of high level technical operations and manufacturing tasks required for producing products.

Job roles/employment outcomes

The MSA40311 Certificate IV in Process Manufacturing is intended for advanced production workers who use a range of equipment and are involved in solving complex problems which require theoretical knowledge, combined with an understanding of operating procedures directly related to producing products.

Application

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.

Pathways Information

Pathways into the qualification

This qualification may be accessed by direct entry.

The units of competency contained within this qualification are common with other qualifications. In particular, the core units and most of the elective units are common to qualifications in the three Process Manufacturing Training Packages (coded PMA, PMB and PMC). Where competency has already been achieved, credit will be granted towards this qualification.

The units of competency in this qualification reflect competencies which are practised within the industry and recognition of prior learning (RPL) should be granted where there is sufficient evidence of competency from work-based experience.

Pathways from the qualification

Further qualification pathways from this qualification include MSA50311 Diploma of Production Management.

The MSA51108 Diploma of Competitive Manufacturing (or latest version) is also appropriate for those needing a qualification covering manufacturing practice and lean principles.

Licensing/Regulatory Information

There are no specific licences that relate to this qualification. However, in some jurisdictions some units of competency in this qualification may have regulatory requirements. Local regulations should be checked for details.

Entry Requirements

Not applicable.

Employability Skills Summary

Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • Complete workplace documentation and records • Use communication technologies efficiently • Develop work instructions, specifications and procedures • Communicate with all team members • Demonstrate effective and appropriate communication and interpersonal skills when dealing with clients • Use most appropriate communication method given priority, cost and customer facilities • Access, interpret and apply technical information
Teamwork	<ul style="list-style-type: none"> • Work cooperatively with people of different ages, gender, race or religion • Liaise with, and provide support to, other team members • Work as part of a team • Identify and manage performance required to meet internal and external customer needs in own work and team • Manage technical processes and provide problem solving support to others
Problem-solving	<ul style="list-style-type: none"> • Investigate problem causes • Identify, rectify or report potential difficulties associated with manufacture of products or provision of services • Identify environmental features, regulations, insurance requirements, legal requirements and other factors which may affect the product or service to be provided • Use material and process knowledge to solve problems • Identify hazards and suggest control measures • Determine production requirements • Conduct tests and analyse results to determine and assess production requirements
Initiative and enterprise	<ul style="list-style-type: none"> • Seek feedback on products, processes and procedures • Gather and analyse information and apply to work-related processes • Record information on the quality and other indicators of products • Support achievement of efficient production processes • Determine and act on situations requiring further information or problem solving
Planning and organising	<ul style="list-style-type: none"> • Identify hazards and implement appropriate hazard control

	<p>measures</p> <ul style="list-style-type: none"> • Demonstrate time management skills • Source and prepare materials and resources • Sequence work to maximise safety and productivity
Self-management	<ul style="list-style-type: none"> • Interpret and apply relevant Acts and regulations • Keep the work area clean and tidy at all times • Monitor own work and work of team and identify and act on any quality issues • Understand own work activities • Manage own time to meet deadlines • Implement workplace procedures and instructions
Learning	<ul style="list-style-type: none"> • Implement learning activities, as appropriate, to ensure achievement of specified production requirements • Assess competencies in meeting job requirements • Be supportive, assertive and use interpersonal skills • Identify own training needs and seek skill development if required • Gather feedback on own work to assess effectiveness in meeting objectives and integrate information into own practice
Technology	<ul style="list-style-type: none"> • Use computer software applications effectively • Work with technology safely and according to workplace standards • Help others use technology efficiently and safely • Use testing technology

Packaging Rules

To be awarded the MSA40311 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.

Elective units must include:

- a minimum of **four (4)** units from Group A
- the balance of units, to a maximum of **seventeen (17)** may be chosen from Groups A, B and C (with a maximum of eleven (11) units from Group C).

Up to **seven (7)** elective units may be chosen from other qualifications in this Training Package, other endorsed Training Packages and accredited courses, as specified below in Groups B and C.

Note: Units marked with an asterisk have one or more prerequisite requirements. Please refer to the individual units for details. Prerequisites are to be counted towards the total number required to complete the qualification.

Core units of competency

Unit code	Unit title
MSS402051A	Apply quality standards
MSAENV272B	Participate in environmentally sustainable work practices
MSAPMOHS200A	Work safely
MSAPMSUP200A	Achieve work outcomes
MSAPMSUP210A	Process and record information

Elective units of competency

Group A

Unit code	Unit title	Prerequisites
MSS403002A	Ensure process improvements are sustained	
MSS403010A	Facilitate change in an organisation implementing competitive systems and practices	
MSS403011A	Facilitate implementation of competitive systems and practices	
MSS403013A	Lead team culture improvement	
MSS403021A	Facilitate a Just in Time system	
MSS403030A	Improve cost factors in work practices	
MSS403040A	Facilitate and improve implementation of 5S	
MSS403041A	Facilitate breakthrough improvements	
MSS403051A	Mistake proof an operational process	
MSS404050A	Undertake process capability improvements	*
MSS404052A	Apply statistics to operational processes	
MSS404060A	Facilitate the use of planning software systems in a work area or team	
MSS404081A	Undertake proactive maintenance analyses	
MSS404082A	Assist in implementing a proactive maintenance strategy	
MSAENV472B	Implement and monitor environmentally sustainable work practices	
MSAPMOHS400A	Contribute to OHS management system	*
MSAPMOHS401A	Assess risk	
MSAPMOPS400A	Optimise process/plant area	*
MSAPMOPS401A	Trial new process or product	
MSAPMOPS404A	Co-ordinate maintenance	

MSAPMOPS405B	Identify problems in fluid power system	
MSAPMOPS406A	Identify problems in electronic control systems	
MSAPMPER400A	Coordinate permit process	*
MSAPMSUP400A	Develop and monitor quality systems	
MEM15001B	Perform basic statistical quality control	
MSL954001A	Obtain representative samples in accordance with a sampling plan	
MSL974003A	Perform chemical tests and procedures	
PMAOHS420B	Develop First Aid procedures and manage resources	
PMAOMIR407B	Audit incident preparedness and established response system	
PMAOMIR418B	Coordinate incident response	
PMAOMIR424B	Develop and maintain community relationships	
PMAOMIR430B	Conduct and assess incident exercises	
PMAOMIR444B	Develop incident containment tactics	
PMAOMIR449B	Monitor legal compliance obligations during incidents	
PMAOPS402A	Respond to abnormal process situations	*
PMAOPS405A	Operate complex control systems	
PMAOPS410B	Monitor remote production facilities	
PMAOPS411B	Manage plant shutdown and restart	
PMAOPS450B	Solve colour problems	
PMASUP410B	Develop plant documentation	
PMASUP420B	Minimise environmental impact of process	
PMASUP432B	Coordinate pipeline projects	
PMASUP440B	Commission/recommission plant	
PMASUP441C	Decommission plant	

PMASUP445A	Participate in HAZOP studies	*
PMBPROD430B	Trial a new die/tool	
PMBPROD431B	Trial a new, advanced or complex mould	
PMBTECH401B	Predict polymer properties and characteristics	*
PMBTECH402B	Set advanced or complex dies	*
PMBTECH403B	Test fibre-composites materials and laminates	
PMBTECH404B	Mould chemical resistant and/or fire retardant fibre-composites	*
PMBTECH405B	Repair damaged fibre-composites structures	*
PMBTECH406A	Diagnose production equipment problems	
PMC554020D	Design and prepare models, moulds and dies	
PMC554090B	Undertake simple refractory design	
PMC554091B	Analyse refractory failures	
PSPPM402B	Manage simple projects	

Group B

Unit code	Unit title	Prerequisites
MSAPMOHS300A	Facilitate the implementation of OHS for a work group	*
MSAPMOPS363A	Organise on site work	
MSAPMPER300C	Issue work permits	*
MSAPMSUP300A	Identify and implement opportunities to maximise production efficiencies	*
MSAPMSUP301A	Apply HACCP to the workplace	
MSAPMSUP303A	Identify equipment faults	
MSAPMSUP309A	Maintain and organise workplace records	
MSAPMSUP310A	Contribute to the development of plant documentation	
MSAPMSUP330A	Develop and adjust a production schedule	
MSAPMSUP382A	Provide coaching/mentoring in the workplace	
MSAPMSUP383A	Facilitate a team	
MSAPMSUP390A	Use structured problem solving tools	
MEM03001B	Perform manual production assembly	
MEM03006B	Set assembly stations	*
MEM09002B	Interpret technical drawing	
MEM09204A	Produce basic engineering detail drawings	*
MEM11005B	Pick and process order	
MEM11006B	Perform production packaging	
MEM11007B	Administer inventory procedures	
MEM12023A	Perform engineering measurements	
MEM15003B	Use improvement processes in team activities	*
MEM15004B	Perform inspection	
MSL973001A	Perform basic tests	

PMBPREP304C	Set a die	
PMBPROD347B	Produce composites using hand lamination	
PMBPROD380B	Produce composites using chopper gun/depositor	
PMBTECH301B	Use material and process knowledge to solve problems	
TAEASS401B	Plan assessment activities and processes	
TAEASS402B	Assess competence	
TAEASS403B	Participate in assessment validation	
TAEDEL301A	Provide work skill instruction	

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

Group C

Unit code	Unit title	Prerequisites
MSS402002A	Sustain process improvements	
MSS402020A	Apply quick changeover procedures	
MSS402021A	Apply Just in Time procedures	
MSS402030A	Apply cost factors to work practices	
MSS402040A	Apply 5S procedures	
MSS402050A	Monitor process capability	
MSS402060A	Use planning software systems in operations	
MSS402080A	Undertake root cause analysis	
MSAPMOHS100A	Follow OHS procedures	
MSAPMOHS110A	Follow emergency response procedures	
MSAPMOHS205A	Control minor incidents	
MSAPMOHS210B	Undertake first response to non-fire incidents	
MSAPMOHS212A	Undertake first response to fire incidents	
MSAPMOHS216A	Operate breathing apparatus	
MSAPMOHS217A	Gas test atmospheres	
MSAPMOHS220A	Provide initial first aid response	
MSAPMOPS100A	Use equipment	
MSAPMOPS101A	Make measurements	
MSAPMOPS102A	Perform tasks to support production	
MSAPMOPS200A	Operate equipment	
MSAPMOPS212A	Use enterprise computers or data systems	
MSAPMPER200C	Work in accordance with an issued permit	
MSAPMPER201A	Monitor and control work permits	

MSAPMPER202A	Observe permit work	*
MSAPMPER205C	Enter confined space	*
MSAPMSUP100A	Apply workplace procedures	
MSAPMSUP101A	Clean workplace or equipment	
MSAPMSUP102A	Communicate in the workplace	
MSAPMSUP106A	Work in a team	
MSAPMSUP172A	Identify and minimise environmental hazards	
MSAPMSUP201A	Receive or despatch goods	
MSAPMSUP204A	Pack products or materials	
MSAPMSUP205A	Transfer loads	
MSAPMSUP230A	Monitor process operations	
MSAPMSUP240A	Undertake minor maintenance	
MSAPMSUP273A	Handle goods	
MSAPMSUP280A	Manage conflict at work	
MSAPMSUP291A	Participate in continuous improvement	
MSAPMSUP292A	Sample and test materials and product	
FPICOT2238A	Cut materials with a hand-held chainsaw	
LMTGN2008B	Coordinate work of team/section	
MEM03003B	Perform sheet and plate assembly	
MEM03004B	Perform electronic/electrical assembly (production)	
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	
PMAOPS280B	Interpret process plant schematics	
PMBHAN103C	Shift materials safely by hand	
PMBPROD247C	Hand lay up composites	
RIIRIS201B	Conduct local risk control	
TLID2010A	Operate a forklift	

A maximum of **three (3)** units may be selected from this Training Package, other endorsed Training Packages and accredited courses, where those units are aligned at Certificate II or III.

Custom Content Section

Not applicable.