

**Victorian Purchasing Guide
for
MSA07 Manufacturing Training Package Version No 8.2**

June 2013





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Victorian Purchasing Guide — Version History

Training Package Version	Date VPG Approved	Comments
8.1 and 8.2	3/6/2013	<p>ISC Upgrades:</p> <ul style="list-style-type: none"> • Seven (7) competitive manufacturing qualifications not carried forward - superseded by new qualifications endorsed 20 April 2012 in MSS11v2 • Competitive manufacturing units of competency not carried forward - superseded by new units endorsed in MSS11v2 • Imported elective units updated in fifteen (15) qualifications to current versions (including prerequisites) • Sample Training Programs revised to reflect updated imported units. • Various editorial changes. <p>Refer to mapping for further details.</p>
8	25/5/2012	<p>Addition of two new units:</p> <ul style="list-style-type: none"> • MSABLIC001 License to operate a standard boiler • MSABLIC002 License to operate an advanced boiler <p>Competitive Manufacturing units have been updated in sample programs for non-competitive manufacturing qualifications. Now superseded Competitive Manufacturing units and qualifications have been retained to align with Version 8 of MSA07 Training Package.</p>
7	26/04/2012	<p>Addition of two new qualifications:</p> <ul style="list-style-type: none"> • MSA40311 Certificate IV in Process Manufacturing • MSA50311 Diploma of Production Management
5.1 and 6	30/9/ 2011	<p>Endorsed changes Addition of eight new qualifications and six new units of competency for recreational vehicle manufacture, retailing, service and repair.</p> <p>Inclusion of an additional 81 imported units as electives for recreational vehicle qualifications.</p> <p>Two new units of competency for water jetting included as electives in MSA30309.</p> <p>One new unit of competency to replace a deleted imported unit.</p> <p>ISC upgrades 11 qualifications adjusted for flexibility/sustainability requirements</p> <p>Minor edits to 5 MSAPM units (MSAPMOHS100A, OHS200A, OPS101A, OPS363A and SUP106A)</p> <p>Imported units updated and minor typographical errors corrected in mapping.</p> <p>Refer to Summary Mapping in the Training Package (Vol 1 – page 38) for details of changes to qualifications and units.</p>

Training Package Version	Date VPG Approved	Comments
5.1	Unpublished	See above
5	22 Jan 2010	Inclusion of: MSA 30309 Certificate III in Surface Preparation and Coating Applications; and 14 units of competency for Trade Measurement
4	1 Dec 2009	Amendments to correct codes and/or titles in the units table on pages 13 and 14 for: MEM09011B, MEM09021B, and MEM16005A.

MSA07 Manufacturing Training Package

Victorian Purchasing Guide

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INTRODUCTION

What is a Victorian Purchasing Guide?

The Victorian Purchasing Guide provides information for use by Registered Training Organisations (RTOs) in the provision of Victorian government subsidised training.

Specifically the Victorian Purchasing Guide provides the following information related to the delivery of nationally endorsed Training Packages in Victoria:

- The nominal hour range (minimum-maximum) available for each qualification.
- Nominal hours for each unit of competency within the Training Package.
- Sample Training Programs

Registration

RTOs must be registered by either the Victorian Registration and Qualifications Authority (VRQA) or the Australian Skills Qualification Authority (ASQA) regulatory body to be eligible to issue qualifications and statements of attainment under the Australian Quality Framework (AQF).

The VRQA is the regulatory authority for Victoria that registers VET training organisations who provide courses to domestic students only and who only offer training in Victoria.

To register to provide training to international students and in other Australian states and territories you will need to apply with ASQA.

QUALIFICATIONS

Code	Title	Qualification Nominal Hour Range	
		Minimum	Maximum
MSA10107	Certificate I in Manufacturing (Pathways)	184	284
MSA10207	Certificate I in Process Manufacturing	140	180
MSA20107	Certificate II in Process Manufacturing	300	450
MSA20208	Certificate II in Manufacturing Technology	210	360
MSA20510	Certificate II in Recreational Vehicle Service and Repair	230	281
MSA20610	Certificate II in Recreational Vehicle Manufacture	250	391
MSA30107	Certificate III in Process Manufacturing	600	800
MSA30208	Certificate III in Manufacturing Technology	230	510
MSA30309	Certificate III in Surface Preparation and Coating Application	610	1050
MSA30510	Certificate III in Recreational Vehicle Service and Repair	380	590
MSA30610	Certificate III in Recreational Vehicle Manufacture	400	750
MSA30710	Certificate III in Recreational Vehicle and Accessories Retailing	460	537
MSA40108	Certificate IV in Manufacturing Technology	360	950
MSA40311	Certificate IV in Process Manufacturing	565	1100
MSA40510	Certificate IV in Recreational Vehicles	560	1280
MSA40710	Certificate IV in Recreational Vehicle and Accessories Retailing	670	1024
MSA50108	Diploma of Manufacturing Technology	650	1270
MSA50510	Diploma of Recreational Vehicles	245	670
MSA50311	Diploma of Production Management	370	800
MSA60108	Advanced Diploma of Manufacturing Technology	1080	2150

UNITS OF COMPETENCY AND NOMINAL HOURS

RTOs are advised that there is a mapping inside the Training Package that describes the relationship between new units and superseded or replaced units from the previous version of MSA07 Manufacturing Training Package. Information regarding transition arrangements can be obtained from the state or national VET Regulating Authority (see Contacts and Links section).

You must be sure that all training and assessment leading to qualifications or Statements of Attainment from the Training Package is conducted against the Training Package units of competency and complies with the requirements in the assessment guidelines.

Listing of the Units of Competency and Nominal Hours

Unit Code	Unit Title	Nominal Hours
MSABLIC001	License to operate a standard boiler	40
MSABLIC002	License to operate an advanced boiler	60
MSAENV272B	Participate in environmentally sustainable work practices	30
MSAENV472B	Implement and monitor environmentally sustainable work practices	40
MSAENV672B	Develop workplace policy and procedures for sustainability	50
MSAPCI101A	Adapt to work requirements in industry	30
MSAPCI102A	Apply effective work practices	40
MSAPCI103A	Demonstrate care and apply safe practices at work	30
MSAPCII295A	Operate manufacturing equipment	40
MSAPCII296A	Make a small furniture item from timber	0
MSAPCII297A	Make an object from cloth using an existing pattern	0
MSAPCII298A	Make an object from metal	0
MSAPCII299A	Make an object from plastic	0
MSAPMOHS100A	Follow OHS procedures	20
MSAPMOHS110A	Follow emergency response procedures	20
MSAPMOHS200A	Work safely	30
MSAPMOHS205A	Control minor incidents	30
MSAPMOHS210B	Undertake first response to non-fire incidents	20
MSAPMOHS212A	Undertake first response to fire incidents	30
MSAPMOHS216A	Operate breathing apparatus	20
MSAPMOHS217A	Gas test atmospheres	30
MSAPMOHS220A	Provide initial first aid response	30
MSAPMOHS300A	Facilitate the implementation of OHS for a work group	40
MSAPMOHS400A	Contribute to OHS management system	40
MSAPMOHS401A	Assess risk	40
MSAPMOHS503A	Maintain the workplace OHS management system	50
MSAPMOHS510A	Manage risk	50
MSAPMOHS601A	Establish workplace OHS management system	60
MSAPMOPS100A	Use equipment	30

Unit Code	Unit Title	Nominal Hours
MSAPMOPS101A	Make measurements	30
MSAPMOPS102A	Perform tasks to support production	30
MSAPMOPS200A	Operate equipment	40
MSAPMOPS201A	Cut polymer materials	20
MSAPMOPS202A	Fabricate polymer materials	40
MSAPMOPS212A	Use enterprise computers or data systems	30
MSAPMOPS244A	Layout and cut materials	30
MSAPMOPS301A	Treat corrosion	20
MSAPMOPS363A	Organise on site work	30
MSAPMOPS400A	Optimise process/plant area	60
MSAPMOPS401A	Trial new process or product	60
MSAPMOPS404A	Co-ordinate maintenance	40
MSAPMOPS405A	Identify problems in fluid power system	50
MSAPMOPS406A	Identify problems in electronic control systems	50
MSAPMOPS601A	Design equipment and systems modifications	80
MSAPMPER200C	Work in accordance with an issued permit	20
MSAPMPER201A	Monitor and control work permits	20
MSAPMPER202A	Observe permit work	20
MSAPMPER205C	Enter confined space	30
MSAPMPER300C	Issue work permits	20
MSAPMPER400A	Coordinate permit process	30
MSAPMSUP100A	Apply workplace procedures	20
MSAPMSUP101A	Clean workplace or equipment	20
MSAPMSUP102A	Communicate in the workplace	20
MSAPMSUP106A	Work in a team	30
MSAPMSUP172A	Identify and minimise environmental hazards	20
MSAPMSUP200A	Achieve work outcomes	30
MSAPMSUP201A	Receive or despatch goods	20
MSAPMSUP204A	Pack products or materials	20
MSAPMSUP205A	Transfer loads	20
MSAPMSUP210A	Process and record information	30
MSAPMSUP230A	Monitor process operations	30
MSAPMSUP240A	Undertake minor maintenance	30
MSAPMSUP273A	Handle goods	20
MSAPMSUP280A	Manage conflict at work	20
MSAPMSUP291A	Participate in continuous improvement	30
MSAPMSUP292A	Sample and test materials and product	40
MSAPMSUP300A	Identify and implement opportunities to maximise production efficiencies	40

Unit Code	Unit Title	Nominal Hours
MSAPMSUP301A	Apply HACCP to the workplace	40
MSAPMSUP303A	Identify equipment faults	40
MSAPMSUP309A	Maintain and organise workplace records	20
MSAPMSUP310A	Contribute to development of plant documentation	30
MSAPMSUP330A	Develop and adjust a production schedule	30
MSAPMSUP382A	Provide coaching/mentoring in the workplace	40
MSAPMSUP383A	Facilitate a team	30
MSAPMSUP390A	Use structured problem solving tools	40
MSAPMSUP400A	Develop and monitor quality systems	50
MSAPMWJ201A	Use high pressure water jetting equipment	60
MSAPMWJ301A	Operate a high pressure water jetting system	60
MSARVG201A	Tow a recreational vehicle safely	10
MSARVS201A	Install LP gas systems in a recreational vehicle	105
MSARVS202A	Repair/service LP gas systems in a recreational vehicle	30
MSARVS301A	Develop and update caravan industry knowledge	20
MSARVS401A	Assess and quote to service a recreational vehicle	40
MSARVT201A	Apply technical knowledge of recreational vehicle manufacturing to work activities	20
MSATCM301A	Test the mechanical properties of materials	30
MSATCM302A	Monitor basic ferrous melting and casting processes	30
MSATCM303A	Monitor basic non-ferrous melting and casting processes	30
MSATCM304A	Interpret basic binary phase diagrams	20
MSATCM305A	Demonstrate basic knowledge of casting operations	30
MSATCM401A	Prepare and examine metallographic samples	40
MSATCM402A	Monitor and test sands, cores and moulds	40
MSATCM403A	Evaluate mould design and gating	40
MSATCM404A	Undertake and interpret results of chemical analysis on metal samples	50
MSATCM405A	Determine and supervise heat treatment of metal	40
MSATCM406A	Apply basic chemistry principles to metallurgy	60
MSATCM501A	Calculate and predict chemical outcomes in metallurgical situations	40
MSATCM502A	Identify and describe equipment for mineral and chemical processing plants	40
MSATCM503A	Recommend a refractory for an application	40
MSATCM504A	Select metal forming process	50
MSATCM505A	Select metal joining process	50
MSATCM506A	Monitor blast furnace operations	50
MSATCM507A	Monitor primary steel making process	50
MSATCM508A	Monitor secondary steelmaking operations	50
MSATCM509A	Recommend ferrous and non ferrous metals or alloys for an	50

Unit Code	Unit Title	Nominal Hours
	application	
MSATCM510A	Apply metallurgical principles and techniques in welding and other thermal processes	60
MSATCM511A	Apply metallurgy principles and practice to determine metal forming and shaping processes	60
MSATCM512A	Apply metallurgy principles and practice to optimise furnace operation	60
MSATCM513A	Plan and complete metallurgical projects	40
MSATCM514A	Select surface treatment methods for metallic components or products	40
MSATCM515A	Analyse metallurgical failures of components and recommend preventative measures	60
MSATCM516A	Select non metallic materials for engineering applications manufacturing, engineering and structural	60
MSATCM517A	Determine corrosion prevention strategies for metal and alloys	60
MSATCM518A	Interpret complex binary phase diagrams	40
MSATCS301A	Interpret architectural and engineering design specifications for structural steel detailing	40
MSATCS302A	Detail bolts and welds for structural steelwork connections	20
MSATCS501A	Detail standardised structural connections	60
MSATCS502A	Detail structural steel members	80
MSATCS503A	Incorporate structural steel detailing into fabrication and construction project management	60
MSATCS504A	Detail ancillary steelwork	40
MSATMINS301A	Inspect a range of simple measures	30
MSATMINS302A	Inspect a range of simple measuring instruments	30
MSATMINS401A	Inspect a range of weighing instruments	60
MSATMINS402A	Inspect a range of liquid measuring instruments using volume measures	60
MSATMINS403A	Inspect a range of trading practices	50
MSATMINS404A	Inspect a range of pre-packaged products	60
MSATMINS501A	Inspect a range of complex measuring instruments	60
MSATMREF301A	Use and maintain reference standards	20
MSATMVER301A	Verify simple measures	30
MSATMVER302A	Verify a simple measuring instrument	30
MSATMVER401A	Verify a limited weighing instrument	60
MSATMVER402A	Verify a liquid measuring instrument using volume measures	60
MSATMVER403A	Verify inspector's class reference standards	50
MSATMVER501A	Verify a complex measuring instrument	50

SAMPLE TRAINING PROGRAMS

A range of Sample Training Plans have been provided to demonstrate the flexibility of qualifications contained in the **MSA07 V8.2 Manufacturing Training Package** but are by no means mandatory.

Occupation / Work Function	Pre-vocational Plastics Fabrication Program	
Qualification Title	Certificate I in Manufacturing (Pathways)	
Qualification Code	MSA10107	
Description	Completion of this qualification should provide the student with a set of competencies that collectively open up pathways into employment and/or further study.	
Unit Code	Unit Title	Hours
Core		
MSAPCI101A	Adapt to work requirements in industry	30
MSAPCI102A	Apply effective work practices	40
MSAPCI103A	Demonstrate care and apply safe practices at work	30
Electives		
MSAPCII299A	Make an object from plastic	Nil
MSAPMOPS101A	Make measurements	30
PMBFIN201C	Finish products and components	30
PMBFIN205C	Hand decorate products	40
PMBPROD236C	Operate hand held air/power equipment for production processes	40
PMBPROD240C	Cut materials	30
	Total	270

Occupation / Work Function	Pre-vocational Garment Making Program	
Qualification Title	Certificate I in Manufacturing (Pathways)	
Qualification Code	MSA10107	
Description	Completion of this qualification should provide the student with a set of competencies that collectively open up pathways into employment and/or further study.	
Unit Code	Unit Title	Hours
Core		
MSAPCI101A	Adapt to work requirements in industry	30
MSAPCI102A	Apply effective work practices	40
MSAPCI103A	Demonstrate care and apply safe practices at work	30
Electives		
LMTCL2001B	Use a sewing machine	40
LMTCL2002B	Provide hand sewing and finishing support	30
LMTCL2006B	Press work	20
LMTCL2007B	Lay up, mark and cut uncomplicated fabrics and lays	20
LMTCL2008B	Finish garment production	20
MSAPCII297A	Make an object from cloth using an existing pattern	Nil
	Total	230

Occupation / Work Function	Pre-vocational Furniture Making Program	
Qualification Title	Certificate I in Manufacturing (Pathways)	
Qualification Code	MSA10107	
Description	Completion of this qualification should provide the student with a set of competencies that collectively open up pathways into employment and/or further study.	
Unit Code	Unit Title	Hours
Core		
MSAPCI101A	Adapt to work requirements in industry	30
MSAPCI102A	Apply effective work practices	40
MSAPCI103A	Demonstrate care and apply safe practices at work	30
Electives		
LMFFM1002B	Operate basic woodworking machines	100
LMFFM2001B	Use furniture making sector hand and power tools	40
LMFFM2002B	Assemble furnishing components	20
LMFFM2003B	Select and apply hardware	16
LMFFM2005B	Join solid timber	8
MSAPCII296A	Make a small furniture item from timber	Nil
	Total	284

Occupation / Work Function	Pre-vocational Metal Fabrication Program	
Qualification Title	Certificate I in Manufacturing (Pathways)	
Qualification Code	MSA10107	
Description	Completion of this qualification should provide the student with a set of competencies that collectively open up pathways into employment and/or further study.	
Unit Code	Unit Title	Hours
Core		
MSAPCI101A	Adapt to work requirements in industry	30
MSAPCI102A	Apply effective work practices	40
MSAPCI103A	Demonstrate care and apply safe practices at work	30
Electives		
MEM03001B	Perform manual production assembly	40
MEM05007C	Perform manual heating and thermal cutting	20
MEM05012C	Perform routine manual metal arc welding	20
MEM18001C	Use hand tools	20
MEM18002B	Use power tools/hand held operations	20
MSAPCII298A	Make an object from metal	Nil
	Total	220

Process Manufacturing Qualifications

Occupation / Work Function	Production Assistant	
Qualification Title	Certificate I in Process Manufacturing	
Qualification Code	MSA10207	
Description	Appropriate for a person working as a production assistant under direct supervision.	
Unit Code	Unit Title	Hours
Core		
MSAPMOHS100A	Follow OHS procedures	20
MSAPMSUP100A	Apply workplace procedures	20
MSAPMSUP102A	Communicate in the workplace	20
Electives		
MSAPMOPS100A	Use equipment	30
MSAPMOPS102A	Perform tasks to support production	30
MSAPMSUP101A	Clean workplace or equipment	20
MSAPMSUP106A	Work in a team	30
	Total	170

Occupation / Work Function	Production Operator	
Qualification Title	Certificate II in Process Manufacturing	
Qualification Code	MSA20107	
Description	Appropriate for a person working as a production operator in a process manufacturing enterprise.	
Unit Code	Unit Title	Hours
Core		
MSAENV272B	Participate in environmentally sustainable work practices	30
MSAPMOHS200A	Work safely	30
MSAPMSUP210A	Process and record information	30
Electives		
MEM18002B	Use power tools / hand held operations	20
MSAPMOPS200A	Operate equipment	40
MSAPMOPS212A	Use enterprise equipment or data systems	30
MSAPMSUP200A	Achieve work outcomes	30
MSAPMSUP106A	Work in a team	30
MSAPMSUP230A	Monitor process operations	30
MSAPMSUP240A	Undertake minor maintenance	30
MSAPMSUP291A	Participate in continuous improvements	30
MSS402051A	Apply quality standards	30
PMBPREP205C*	Assemble materials and equipment for production	30
TLID2010A	Operate a forklift	40
	Total	430

* Unit drawn from PMB07 Plastics, Rubber and Cablemaking Training Package.

Occupation / Work Function	Advanced Production Operator	
Qualification Title	Certificate III in Process Manufacturing	
Qualification Code	MSA30107	
Description	Appropriate for a person working as an advanced production operator in a process manufacturing enterprise.	
Unit Code	Unit Title	Hours
Core		
MSS402051A	Apply quality standards	30
MSAPMOHS200A	Work safely	30
MSAENV272B	Participate in environmentally sustainable work practices	30
MSAPMSUP210A	Process and record information	30
Electives		
MEM09002B	Interpret technical drawing	40
MSAPMOHS300A	Facilitate the implementation of OHS for a work group	40
MSAPMSUP200A	Achieve work outcomes	30
MSAPMSUP300A	Identify and implement opportunities to maximise production efficiencies	40
MSAPMSUP303A	Identify equipment faults	40
MSAPMSUP330A	Develop and adjust a production schedule	30
MSAPMSUP383A	Facilitate a team	30
MSAPMSUP390A	Use structured problem solving tools	40
MSS402002A	Sustain process improvements	40
MSS402020A	Apply quick changeover procedures	40
MSS402050A	Monitor process capability	30
MSS402060A	Use planning software systems in operations	40
PMBPREP303C	Set up equipment for continuous operation	30
PMBPROD300B	Produce products	40
PMBPROD385A	Program computer controlled equipment	40
PMBTECH301B	Use material and process knowledge to solve problems	40
TAEDEL301A	Provide work skill instruction	40
	Total	750

Occupation	Team Leader - Manufacturing	
Qualification Title	Certificate IV in Process Manufacturing	
Qualification Code	MSA40311	
Description	Appropriate for a person working as a team leader in a medium to large manufacturing enterprise.	
Unit Code	Unit Title	Hours
Core		
MSAENV272B	Participate in environmentally sustainable work practices	30
MSAPMOHS200A	Work safely	30
MSAPMSUP200A	Achieve work outcomes	30
MSAPMSUP210A	Process and record information	30
MSS402051A	Apply quality standards	30
Electives		
MEM15001B	Perform basic statistical quality control	20
MSAPMOHS400A	Contribute to OHS management system	40
MSAPMOHS401A	Assess risk	40
MSAPMOPS400A	Optimise process/plant area	60
MSAPMOPS404A	Co-ordinate maintenance	40
MSAPMSUP303A	Identify equipment faults	40
MSAPMSUP330A	Develop and adjust a production schedule	30
MSAPMSUP382A	Provide coaching/mentoring in the workplace	40
MSAPMSUP390A	Use structured problem solving tools	40
MSS403002A	Ensure process improvements are sustained	50
MSS403010A	Facilitate change in an organisation implementing competitive systems and practices	50
MSS403011A	Facilitate implementation of competitive systems and practices	40
MSS403040A	Facilitate and improve implementation of 5S	50
MSS403041A	Facilitate breakthrough improvements	40
MSS404052A	Apply statistics to operational processes	40
MSS404060A	Facilitate the use of planning software systems in a work area or team	50
MSS404081A	Undertake proactive maintenance analyses	50
PMAOHS420B	Develop First Aid procedures and manage resources	40
PMAOPS402A	Respond to abnormal process situations	50
PMAOPS405A	Operate complex control systems	80
PMASUP420B	Minimise environmental impact of process	40
PMBTECH406A	Diagnose production equipment problems	50
Total Hours		1090

Occupation	Production Manager	
Qualification Title	Diploma of Production Management	
Qualification Code	MSA50311	
Description	Appropriate for a person working as a production manager in a medium to large process manufacturing enterprise.	
Unit Code	Unit Title	Hours
Core		
MSAENV472B	Implement and monitor environmentally sustainable work practices	40
Electives		
BSBMGT502B	Manage people performance	70
BSBWRK510A	Manage employee relations	80
MEM14001B	Schedule material deliveries	80
MSS405022A	Design a process layout	80
MSS405032A	Analyse cost implications of maintenance strategy	60
MSS405050A	Determine and improve process capability	80
MSS015015A	Evaluate sustainability impact of a process	80
TLIA5058A	Manage facility and inventory requirements	140
TLIP4013A	Implement and monitor logistics planning and process	80
Total Hours		790

Technology Cadetship Qualifications

Occupation / Work Function	Manufacturing Trainee	
Qualification Title	Certificate II in Manufacturing Technology	
Qualification Code	MSA20208	
Description	For a career start in manufacturing	
Unit Code	Unit Title	Hours
Core		
MSAENV272B	Participate in environmentally sustainable work practices	30
MSAPMOHS200A	Work safely	30
MSS402001A	Apply competitive manufacturing practices	40
MSS402051A	Apply quality standards	30
MSS402080A	Undertake root cause analysis	50
Electives		
MSAPCII295A	Operate manufacturing equipment	40
MSAPCII296A	Make a small furniture item from timber	0
MSS402010A	Manage the impact of change on own work	40
MSS402031A	Interpret product costs in terms of customer requirements	30
MSS402050A	Monitor process capability	30
	Total	320

Occupation / Work Function	Manufacturing Technical Operative	
Qualification Title	Certificate III in Manufacturing Technology	
Qualification Code	MSA30208	
Description	For a career in manufacturing or production assisting technical operations.	
Unit Code	Unit Title	Hours
Core		
MEM30012A	Apply mathematical techniques in a manufacturing engineering or related environment	40
MSAENV272B	Participate in environmentally sustained work practices	30
MSS402051A	Apply quality standards	30
Electives		
MEM30015A	Develop recommendations for basic set up time improvements	20
MEM30017A	Use basic preventative maintenance techniques and tools	40
MEM30018A	Undertake basic process planning	20
MEM30020A	Develop and manage a plan for a simple manufacturing related project	30
MEM30021A	Prepare a simple production schedule	20
MEM30023A	Prepare a simple cost estimate for a manufactured product	20
MSS403030A	Improve cost factors in work practices	50
MSS403032A	Analyse manual handling processes	50
	Total	350

Occupation / Work Function	Laboratory Operations Technical Assistant	
Qualification Title	Certificate IV in Manufacturing Technology	
Qualification Code	MSA40108	
Description	For a career in laboratory operations and associated quality and testing functions.	
Unit Code	Unit Title	Hours
Core		
MEM16008A	Interact with computing technology	20
MEM30012A	Apply mathematical techniques in a manufacturing engineering or related environment	40
MSAENV272B	Participate in environmentally sustainable work practices	30
MSS402051A	Apply quality standards	30
Electives		
MSL922001A	Record and present data	40
MSL933001A	Maintain the laboratory/field workplace fit for purpose	30
MSL934002A	Apply quality system and continuous improvement processes	80
MSL952002A	Handle and transport samples or equipment	30
MSL954001A	Obtain representative samples in accordance with sampling plan	40
MSL963001A	Operate basic handblowing equipment	60
MSL963002A	Repair glass apparatus using simple glassblowing equipment	40
MSL973001A	Perform basic tests	60
MSL973006A	Prepare trial batches for evaluation	40
MSL974001A	Prepare, standardise and use solutions	100
MSL974003A	Perform chemical tests and procedures	100
MSS403002A	Ensure process improvements are sustained	50
	Total	790

Occupation / Work Function	Industrial Metallurgist	
Qualification Title	Diploma of Manufacturing Technology	
Qualification Code	MSA50108	
Description	For a career in metallurgy operations and associated quality and testing functions.	
Unit Code	Unit Title	Hours
Core		
MEM16006A	Organise and communicate information	20
MEM16008A	Interact with computing technology	20
MEM30012A	Apply mathematical techniques in a manufacturing engineering or related environment	40
MSAENV272B	Participate in environmentally sustainable work practices	30
MSS402051A	Apply quality standards	30
Electives		0
MEM06003C	Carry out heat treatment	60
MEM09002B	Interpret technical drawing	40
MEM23061A	Select and test mechanical engineering materials	60
MEM24012C	Apply metallurgy principles	40
MEM30007A	Select common engineering materials	40
MSATCM304A	Interpret basic binary phase diagrams	20
MSATCM401A	Prepare and examine metallographic samples	40
MSATCM405A	Determine and supervise heat treatment of metal	40
MSATCM406A	Apply basic chemistry principles to metallurgy	60
MSATCM501A	Calculate and predict chemical outcomes in metallurgical situations	40
MSATCM504A	Select metal forming process	50
MSATCM511A	Apply metallurgy principles and practice to determine metal forming and shaping processes	60
MSATCM514A	Select surface treatment methods for metallic components or products	40
MSATCM516A	Select non metallic materials for engineering applications manufacturing, engineering and structural	60
MSATCM517A	Determine corrosion prevention strategies for metal and alloys	60
MSAENV672B	Development workplace policy and procedures for environmental sustainability	50
	Total	900

Occupation / Work Function	Polymer Technologist	
Qualification Title	Advanced Diploma of Manufacturing Technology	
Qualification Code	MSA60108	
Description	For a career in polymer operations and associated quality and testing functions.	
Unit Code	Unit Title	Hours
Core		
MEM16006A	Organise and communicate information	20
MEM16008A	Interact with computing technology	20
MEM23001A	Apply advanced mathematical techniques in a manufacturing engineering or related environment	80
MEM30012A	Apply mathematical techniques in a manufacturing engineering or related environment	40
MSAENV272B	Participate in environmentally sustainable work practices	30
MSS402051A	Apply quality standards	30
Electives		
MSAPMOHS510A	Manage risk	50
MSAPMOPS401A	Trial new process or product	60
MSS404052A	Apply statistics to operational processes	40
MSS405075A	Facilitate the development of a new product	80
PMAOPS350B	Match and adjust colour	50
PMAOPS450B	Solve colour problems	50
PMAOPS550B	Develop a colour formulation	60
PMAOPS600C	Modify plant	60
PMBPROD235C	Use materials and process knowledge to complete work operations	50
PMBTECH301B	Use material and process knowledge to solve problems	40
PMBTECH401B	Predict polymer properties and characteristics	60
PMBTECH406A	Diagnose production equipment problems	50
PMBTECH501B	Analyse equipment performance	50
PMBTECH502B	Review and analyse production trials and specify re-trials	60
PMBTECH503B	Determine rheology and output of plastics materials from processing equipment	70
PMBTECH504B	Determine heat transfer loads for processing equipment	50
PMBTECH505B	Choose polymer materials for an application	50
PMBTECH506B	Analyse the design of products and tools	80
PMBTECH507A	Develop fibre composite products using cored laminate techniques	70

Qualification Title	Advanced Diploma of Manufacturing Technology (continued)	
Qualification Code	MSA60108	
Unit Code	Unit Title	Hours
PMBTECH508A	Develop a new compound	60
PMBTECH509A	Modify an existing product	50
PMBTECH510A	Analyse failure in polymeric materials	60
PMBTECH601B	Develop a new product	100
PMBTECH602B	Develop a new die or tool	150
PMBTECH603B	Design structural/mechanical polymer components	100
	Total	1820

Protective Coating Qualification

Occupation	Protective Coating Applicator	
Qualification Title	Certificate III in Surface Preparation and Coating Application	
Qualification Code	MSA30309	
Description	People with this qualification would be expected to work under routine only supervision, preparing surfaces and/or applying protective coatings in accordance with a provided technical specification. They would be expected to recognise situations where the intended approach was not appropriate/not working and take appropriate action to ensure the final result is satisfactory.	
Notes	For advice on how to choose electives others than those listed below, please refer to the Victorian endorsement submission for an extension to the MSA07 Manufacturing Training Package and its Qualifications Packaging Rules or contact the CMM Engineering Industries on (03) 9286 9880 for this qualification.	
Unit Code	Unit Title	Hours
Core		
MEM12023A	Perform engineering measurements	30
MEM12024A	Perform computations	30
MEM14004A	Plan to undertake a routine task	10
MEM14005A	Plan a complete activity	20
MEM15002A	Apply quality systems	20
MEM15024A	Apply quality procedures	10
MEM16006A	Organise and communicate information	20
MEM16007A	Work with others in a manufacturing, engineering or related environment	10
MEM16008A	Interact with computing technology	20
MSAENV272B	Participate in environmentally sustainable work practices	30
MSAPMOHS200A	Work safely	30
Electives		
MEM08002C	Pre-treat work for subsequent surface coating	40
MEM08011B	Prepare surfaces using solvents and/or mechanical means	20
MEM08012B	Prepare surfaces by abrasive blasting (basic)	40
MEM08014B	Apply protective coatings (basic)	40
MEM08015B	Apply protective coatings (advanced)	40
MEM08016B	Control blast coating by-products, materials and emissions	10
MEM11001C	Erect/dismantle scaffolding and equipment	40
MEM11002C	Erect/dismantle complex scaffolding and equipment	40
MEM11010B	Operate mobile load shifting equipment	40
MEM11011B	Undertake manual handling	20
MEM11021B	Perform advanced operation of load shifting equipment	20
MEM13003B	Work safely with industrial chemicals and materials	20
MEM18001C	Use hand tools	20
MEM18002B	Use power tools/hand held operations	20
MSAPMOHS216A	Operate breathing apparatus	20
MSAPMOPS201A	Cut polymer materials	20
MSAPMOPS301A	Treat corrosion	20
MSAPMPER205C	Enter confined space	30
PMBPROD242A	Bond polymers to surfaces	40
RIIOHS204A	Work safely at heights	20
	Total	790

Recreational Vehicle Qualifications

Occupation / Work Function	Recreational vehicle service & repair assistant technician	
Qualification Title	Certificate II in Recreational Vehicle Service and Repair	
Qualification Code	MSA20510	
Description	The Certificate II in Recreational Vehicle Servicing & Repair is appropriate for people seeking work in the Recreational Vehicle Service & Repair Industry and is designed to reflect the role of entry-level employee. Assistant Technicians use hand and power tools and perform arc welding . They may also be required to remove and re-install furniture and appliances in a recreational vehicle under instruction.	
Notes	For advice on how to choose electives others than those listed below, please refer to the Victorian endorsement submission for an extension to the MSA07 Manufacturing Training Package and its Qualifications Packaging Rules or contact the CMM Engineering Industries, Automotive on (03) 9425 5761 for this qualification.	
Unit Code	Unit Title	Hours
Core		
MSAENV272B	Participate in environmentally sustainable work practices	30
MSAPMOHS200A	Work safely	30
MSAPMSUP102A	Communicate in the workplace	20
Electives		
AURETR2015	Inspect and service batteries	10
AURTTB2001	Inspect and service braking systems	20
AURTTD2004	Inspect and service suspension systems	10
AURTTJ2002	Remove and refit wheel hubs and associated brake components	20
AURVTN2005	Remove and fit protector mouldings, transfers and decals	15
MEM11011B	Undertake manual handling	20
MEM18001C	Use hand tools	20
MEM18002B	Use power tools/hand held operations	20
MEM18038B	Maintain wheels and tyres	20
MSAPMSUP101A	Clean workplace or equipment	20
MSARVS301A	Develop and update caravan industry knowledge	20
	Total	275

Occupation / Work Function	Recreational vehicle manufacturing technician	
Qualification Title	Certificate III in Recreational Vehicle Manufacture	
Qualification Code	MSA30610	
Description	<p>Certificate III in Recreational Vehicle Manufacturing is appropriate for people seeking to work in the Recreational Vehicle Manufacturing Industry, and is designed to reflect the role of a Recreational Vehicle Manufacturer.</p> <p>The person may be employed within a large manufacturing organisation or a smaller workshop.</p> <p>Technicians interpret drawings, apply quality standards and procedures, and carry out mechanised cutting. They may also build recreational vehicle walls, floor, roof, and furniture.</p>	
Notes	<p>For advice on how to choose electives others than those listed below, please refer to the Victorian endorsement submission for an extension to the MSA07 Manufacturing Training Package and its Qualifications Packaging Rules or contact the CMM Engineering Industries, Automotive on (03) 9425 5761 for this qualification.</p>	
Unit Code	Unit Title	Hours
MSAENV272B	Participate in environmentally sustainable work practices	30
MSAPMOHS200A	Work safely	30
MSAPMSUP102A	Communicate in the workplace	20
Electives		
AURETR2012	Test and repair basic electrical circuits	40
AURVTT3015	Fabricate canvas products	30
AURVTT3016	Fabricate frame structures	40
AURVTT3019	Fabricate and install canopies and curtains	40
AURVTG3011	Install side windows	15
MEM03001B	Perform manual production assembly	40
MEM05005B	Carry out mechanical cutting	20
MEM12023A	Perform engineering measurements	30
MEM09002B	Interpret technical drawing	40
MEM15004B	Perform inspection	20
MEM15024A	Apply quality procedures	10
MSS402080A	Undertake root cause analysis	50
MSAPMOPS212A	Use enterprise computers or data systems	30
MSAPMSUP101A	Clean workplace or equipment	20
MSAPMSUP291A	Participate in continuous improvement	30
MSARVS301A	Develop and update caravan industry knowledge	20
MSARVT201A	Apply technical knowledge of recreational vehicle manufacturing to work activities	20
SIRXSLS002A	Advise on products and services	30
TLID2010A	Operate a forklift	40
	Total	645

Occupation / Work Function	Assistant Manager or Supervisor (sales & marketing) in retail outlets	
Qualification Title	Certificate IV in Recreational Vehicle and Accessories Retailing	
Qualification Code	MSA40710	
Description	Certificate IV in Recreational Vehicle and Accessories Retailing is appropriate for people seeking to work in the Recreational Vehicle and Accessories Retailing Industry, and is designed to reflect the role of an assistant manager or supervisor. Assistant Managers or Supervisors buy merchandise and coordinate presentation, monitor and support staff participating in retailing operations, and manage quality customer service. They may also develop marketing strategies, and manage online purchasing and inventory.	
Notes	For advice on how to choose electives others than those listed below, please refer to the Victorian endorsement submission for an extension to the MSA07 Manufacturing Training Package and its Qualifications Packaging Rules or contact the CMM Engineering Industries, Automotive on (03) 9425 5761 for this qualification.	
Unit Code	Unit Title	Hours
MSAENV272B	Participate in environmentally sustainable work practices	30
MSAPMOHS200A	Work safely	30
MSAPMSUP102A	Communicate in the workplace	20
Electives		
AUMANA3001	Prepare and document quotation	40
AURAAA4002	Determine retail rates for work	60
AURACA2001	Establish relations with customers	20
AURACA3002	Establish customer requirements of a complex nature	40
AURACA3003	Build customer relations	20
AURafa2004	Solve routine problems in an automotive workplace	20
AURAKA3002	Adapt work processes to new technologies	40
AURAMA3004	Maintain business image	15
AURAMA4005	Manage complex customer issues	50
AURANN4001	Prepare a vehicle repair quotation	15
AURATA3005	Estimate complex jobs	30
AURC341903A	Apply relevant finance, leasing and insurance contracts/policies	15
AURSBA3002	Apply automotive parts interpretation process	40
AURSCA2002	Present stock and sales area	20
AURSCA2003	Apply sales procedures	40
AURSCA2004	Carry out cash, credit and funds transfers	35
AURSLA2001	Apply legal requirements relating to product sales	15
AURV365356A	Read and interpret vehicle body repair estimation/quotation	25
AURVTN4032	Determine vehicle damage and recommended repair procedures	40
MEM15002A	Apply quality systems	20

Qualification Title	Certificate IV in Recreational Vehicle and Accessories Retailing (continued)	
Unit Code	Unit Title	Hours
MEM15004B	Perform inspection	20
MEM16012A	Interpret technical specifications and manuals	40
MSAENV472B	Implement and monitor environmentally sustainable work practices	40
MSAPMOPS212A	Use enterprise computers or data systems	30
MSARVS301A	Develop and update caravan industry knowledge	20
MSARVS401A	Assess and quote to service a recreational vehicle	40
SIRXINV004A	Buy merchandise	50
SIRXMER004A	Manage merchandise and store presentation	35
UEGNSG604B	Fill gas cylinders	45
	Total	1000

Occupation / Work Function	Manager within the Recreational Vehicle Industry	
Qualification Title	Diploma of Recreational Vehicles	
Qualification Code	MSA50510	
Description	Diploma of Recreational Vehicles is appropriate for people seeking to work in the Recreational Vehicle in the role of senior technicians and managers in a recreational vehicle manufacturing, repair or service enterprise. People with this qualification would be expected to undertake technical projects and/or manage departments or entire enterprises undertaking the manufacture, service and repair of recreational vehicles.	
Notes	For advice on how to choose electives others than those listed below, please refer to the Victorian endorsement submission for an extension to the MSA07 Manufacturing Training Package and its Qualifications Packaging Rules or contact the CMM Engineering Industries, Automotive on (03) 9425 5761 for this qualification.	
Unit Code	Unit Title	Hours
MSAENV272B	Participate in environmentally sustainable work practices	30
MSAPMOHS200A	Work safely	30
MSAPMSUP210A	Process and record information	30
Electives		
AURTNA5001	Estimate and calculate costs to repair, maintain or modify a vehicle	40
AURV365356A	Read and interpret vehicle body repair estimation/quotation	25
MEM09002B	Interpret technical drawing	40
MEM09204A	Prepare basic engineering drawings	80
MEM15004B	Perform inspection	20
MEM16012A	Interpret technical specifications and manuals	40
MSS405041A	Implement improvement systems in an organisation	60
	Total	395

CONTACTS AND LINKS

Industry Skills Council (ISC)		
Manufacturing Skills Australia	This ISC is responsible for developing this MSA07 Version 8.2 Manufacturing Training Package and can be contacted for further information. You can also source copies of the Training Package and support material.	Address: PO Box 289, North Sydney, NSW, 2089. Phone/fax: 02 9955 5500/ 02 9955 8044. Email: info@mskills.com.au Web: http://www.mskills.com.au/
National Register for VET in Australia		
Training.gov.au (TGA)	TGA is the Australian governments' official National Register of information on Training Packages, qualifications, courses, units of competency and RTOs.	www.training.gov.au
Australian Government		
The Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education	DIICCSRTE provides a range of services and resources to assist in delivery of Training Packages. Search the DIICCSRTE website for links to a range of relevant resources and publications.	http://www.innovation.gov.au/pages/default.aspx
State Government		
Department of Education and Early Childhood Development Higher Education and Skills Group	Higher Education and Skills Group is responsible for funding and the implementation of Vocational Education and Training (VET) in Victoria, including Apprenticeships and Traineeships.	General information: www.skills.vic.gov.au Approved Training Schemes: http://www.skills.vic.gov.au/corporate/publications/brochures-and-fact-sheets/apprenticeships-and-traineeships-in-victoria-industry-guides

Curriculum Maintenance Manager (CMM)		
General Manufacturing	The CMM service is provided by Executive Officers located within Victorian TAFE institutes on behalf of Skills Victoria.	Paul Saunders Address: Chisholm Institute, PO Box 684, Dandenong, Vic. 3175. Phone/fax: 03 9238 8448 / 03 9238 8504 Email: paul.saunders@chisholm.edu.au Web: http://trainingsupport.skills.vic.gov.au/
State VET Regulatory Authority		
Victorian Registration and Qualifications Authority (VRQA)	The VRQA is a statutory authority responsible for the registration of education and training providers in Victoria to ensure the delivery of quality education and training.	www.vrqa.vic.gov.au Phone: 03 9637 2806
National VET Regulatory Authority		
Australian Skills Quality Authority (ASQA)	ASQA is the national regulator for Australia's VET sector vocational education and training sector. ASQA regulates courses and training providers to ensure nationally approved quality standards are met.	www.asqa.gov.au Info line: 1300 701 801
Industry Regulatory Body		
Victorian Work Cover Authority	The industry Regulatory body can provide advice on licensing, legislative or regulatory requirements which may impact on the delivery of training or the issuance of qualifications in this Training Package.	Address: Level 24, 222 Exhibition Street, Melbourne, 3000. Phone: 03 9641 1555 Email: info@workcover.vic.gov.au Web: http://www.workcover.vic.gov.au
WorkSafe		
WorkSafe Victoria	WorkSafe needs to provide written verification before High Risk Work Units can be added to an RTO's scope of registration.	www.worksafe.vic.gov.au Info line: 1800 136 089

GLOSSARY

Code	Nationally endorsed Training Package qualification code.
Title	Nationally endorsed Training Package qualification title.
Unit Code	Nationally endorsed Training Package unit code.
Unit Title	Nationally endorsed Training Package unit title.
Nominal Hours	The anticipated hours of supervised learning or training deemed necessary to conduct training and assessment activities associated with the program of study. These hours are determined by the Victorian State Training Authority. Nominal hours may vary for a qualification depending on the units of competency selected.
Scope of Registration	Scope of registration specifies the AQF qualifications and/or units of competency the training organisation is registered to issue and the industry training and/or assessment services it is registered to provide.