

**Victorian Purchasing Guide
for
PMA Chemical, Hydrocarbons and Refining
Training Package**

July 2016



© State of Victoria (Department of Education and Training) 2016.

Copyright of this material is reserved to the Crown in the right of the State of Victoria. This work is licensed under a Creative Commons Attribution-NoDerivs 3.0 Australia licence (<http://creativecommons.org/licenses/by-nd/3.0/au/>). You are free to use, copy and distribute to anyone in its original form as long as you attribute Skills Victoria, Department of Education and Training, as the author, and you license any derivative work you make available under the same licence.

Disclaimer

In compiling the information contained in and accessed through this resource, the Department of Education and Training (DET) has used its best endeavours to ensure that the information is correct and current at the time of publication but takes no responsibility for any error, omission or defect therein.

To the extent permitted by law DET, its employees, agents and consultants exclude all liability for any loss or damage (including indirect, special or consequential loss or damage) arising from the use of, or reliance on the information contained herein, whether caused or not by any negligent act or omission. If any law prohibits the exclusion of such liability, DET limits its liability to the extent permitted by law, for the resupply of the information.

Third party sites

This resource may contain links to third party websites and resources. DET is not responsible for the condition or content of these sites or resources as they are not under its control.

Third party material linked from this resource is subject to the copyright conditions of the third party. Users will need to consult the copyright notice of the third party sites for conditions of usage.



Victorian Purchasing Guide — Version History

Training Package Version	Date VPG Released	Comments
PMA Chemical, Hydrocarbons and Refining Training Package Release No 1	7 July 2016	<p>Release 1 of the PMA Chemical, Hydrocarbons and Refining Training Package reflects the transitioning of the PMA08 Chemicals, Hydrocarbons and Refining Training Package to the new Standards for Training Packages.</p> <ul style="list-style-type: none"> ▪ PMA70108 Graduate Certificate in Surface Coating Technology is not carried forward. <p>This Victorian Purchasing Guide also reflects the changes made from Maximum Nominal Hours to Maximum and Minimum Payable Hours.</p> <p>For detailed mapping of qualifications and units between PMA and PMA08 please refer to the PMA Implementation Guide Appendix:</p> <p>https://vetnet.education.gov.au/Pages/default.aspx</p>

PMA Chemical, Hydrocarbons and Refining Training Package Victorian Purchasing Guide

CONTENTS

INTRODUCTION	5
What is a Victorian Purchasing Guide?	5
Registration	5
QUALIFICATIONS	6
UNITS OF COMPETENCY AND NOMINAL HOURS	7
SAMPLE TRAINING PROGRAMS	12
CONTACTS AND LINKS	12
GLOSSARY	19



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	Minimum Payable Hours	Maximum Payable Hours
PMA20116	Certificate II in Process Plant Operations	608	640
PMA30116	Certificate III in Process Plant Operations	760	800
PMA40116	Certificate IV in Process Plant Technology	1102	1160
PMA50116	Diploma of Process Plant Technology	570	600
PMA60116	Advanced Diploma of Process Plant Technology	884	930

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 PMA Chemical, Hydrocarbons and Refining 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
PMAOMIR210	Control evacuation to muster point	20
PMAOMIR301	Undertake initial rescue	60
PMAOMIR302	Respond to a helideck incident	30
PMAOMIR305	Operate panel during an emergency	50
PMAOMIR317	Facilitate search and rescue operations	40
PMAOMIR320	Manage incident response information	40
PMAOMIR321	Manage communication systems during an incident	30
PMAOMIR346	Assess and secure an incident site	30
PMAOMIR407	Audit incident preparedness and established response systems	80
PMAOMIR418	Coordinate incident response	40
PMAOMIR424	Develop and maintain community relationships	30
PMAOMIR430	Conduct and assess incident exercises	35
PMAOMIR444	Develop incident containment tactics	40
PMAOMIR449	Monitor legal compliance obligations during incidents	40
PMAOMIR512	Establish incident response preparedness and response systems	70
PMAOMIR523	Manage corporate media requirements in a crisis	25
PMAOMIR575	Coordinate welfare support activities in response to an incident	30
PMAOMIR622	Build partnerships to improve incident response capacity	30
PMAOMIR650	Manage a crisis	80
PMAOPS101	Read dials and indicators	15
PMAOPS105	Select and prepare materials	15
PMAOPS201	Operate fluid flow equipment	60
PMAOPS202	Operate fluid mixing equipment	20
PMAOPS204	Select and use utilities and services	40
PMAOPS205	Operate heat exchangers	40
PMAOPS208	Operate chemical separation equipment	30
PMAOPS210	Operate solids handling equipment	20
PMAOPS211	Operate manufacturing extrusion systems	40
PMAOPS213	Package product/material	20
PMAOPS216	Operate local control system	40

Unit Code	Unit Title	Nominal Hours
PMAOPS217	Operate wet milling equipment	40
PMAOPS220	Monitor chemical reactions in the process	30
PMAOPS221	Operate and monitor prime movers	40
PMAOPS222	Operate and monitor pumping systems and equipment	40
PMAOPS223	Operate and monitor valve systems	20
PMAOPS224	Provide fluids for utilities and support	20
PMAOPS226	Monitor and operate flare systems	30
PMAOPS230	Monitor, operate and maintain pipeline stations and equipment	40
PMAOPS231	Control gas odourisation	10
PMAOPS232	Operate filtration equipment	40
PMAOPS233	Monitor wells and gathering systems	30
PMAOPS234	Monitor and operate low pressure compressors	30
PMAOPS236	Monitor continuous process plant	40
PMAOPS240	Store fluids in bulk	30
PMAOPS241	Operate Joule-Thomson effect device	30
PMAOPS242	Moor ships for transfer of bulk processed particulates or fluids	30
PMAOPS246	Operate separation equipment	15
PMAOPS247	Operate powered separation equipment	15
PMAOPS260	Conduct screening operations	30
PMAOPS261	Operate bulk solids loading equipment	30
PMAOPS262	Operate digestion equipment	30
PMAOPS263	Operate leaching equipment	30
PMAOPS264	Operate solvent extraction equipment	30
PMAOPS265	Operate magnetic/electrical separation equipment	30
PMAOPS280	Interpret process plant schematics	20
PMAOPS290	Operate a biotreater	30
PMAOPS300	Operate a production unit	40
PMAOPS301	Operate a distillation unit	40
PMAOPS302	Operate reactors and reaction equipment	40
PMAOPS303	Operate furnaces to induce reaction	50
PMAOPS304	Operate and monitor compressor systems and equipment	30
PMAOPS305	Operate process control systems	60
PMAOPS307	Transfer bulk fluids into/out of storage facility	40
PMAOPS308	Organise storage and logistics of general materials	20
PMAOPS309	Operate solids handling/storage facility	40
PMAOPS312	Undertake ship loading/unloading operations	40
PMAOPS319	Adjust batch	40
PMAOPS320	Conduct artificial lift	20
PMAOPS321	Undertake well management	40

Unit Code	Unit Title	Nominal Hours
PMAOPS323	Operate and monitor heating furnace	40
PMAOPS324	Operate a gas turbine	50
PMAOPS325	Generate electrical power	30
PMAOPS326	Operate gas absorption unit	40
PMAOPS327	Operate fixed bed adsorption unit	40
PMAOPS329	Operate liquid extraction unit	40
PMAOPS330	Communicate and monitor pipeline activities	40
PMAOPS333	Operate wells and gathering systems	30
PMAOPS335	Conduct pipeline pigging	20
PMAOPS340	Operate cryogenic processes	40
PMAOPS350	Match and adjust colour	50
PMAOPS360	Operate a metalliferous kiln/furnace	40
PMAOPS361	Operate a smelting furnace	40
PMAOPS362	Operate a blast furnace	40
PMAOPS364	Operate an electrochemical process	40
PMAOPS365	Operate pelletising equipment	30
PMAOPS366	Operate sintering equipment	30
PMAOPS390	Operate a biochemical process	40
PMAOPS402	Respond to abnormal process situation	50
PMAOPS405	Operate complex control systems	80
PMAOPS410	Operate remote production facilities	40
PMAOPS411	Manage plant shutdown and restart	40
PMAOPS433	Manage wells and gathering systems	40
PMAOPS434	Commission wells and gathering systems	40
PMAOPS450	Solve colour problems	50
PMAOPS460	Monitor and operate tailings management facilities	50
PMAOPS500	Optimise production systems	100
PMAOPS501	Provide operational expertise to a project team	80
PMAOPS505	Control the process during abnormal situations	80
PMAOPS511	Determine energy transfer loads	40
PMAOPS512	Determine mass transfer loads	40
PMAOPS520	Manage utilities	50
PMAOPS521	Plan plant shutdown	50
PMAOPS522	Coordinate plant shutdown	50
PMAOPS550	Develop a colour formulation	60
PMAOPS560	Plan and design tailings management facilities	80
PMAOPS600	Modify plant	60
PMAOPS601	Debottleneck plant	60
PMAOPS751	Apply physiochemical knowledge to select raw materials for surface	80

Unit Code	Unit Title	Nominal Hours
	coatings	
PMAOPS752	Develop a decorative coating	60
PMAOPS753	Develop a non-decorative coating or ink	60
PMAOPS755	Provide surface coatings application advice	60
PMASMELT260	Form carbon anodes	40
PMASMELT261	Bake carbon anodes	30
PMASMELT262	Clean and strip anode rods	30
PMASMELT263	Spray carbon anodes	40
PMASMELT264	Start up reduction cells	60
PMASMELT265	Operate reduction cells	60
PMASMELT266	Deliver molten metal	30
PMASMELT267	Cast ingots	40
PMASMELT268	Operate vertical direct casting process	60
PMASMELT269	Operate cell tending equipment	30
PMASMELT270	Supply product from reduction cells	30
PMASUP236	Operate vehicles in the field	20
PMASUP237	Undertake crane, dogging and load transfer operations	40
PMASUP241	Maintain pipeline easements	20
PMASUP242	Monitor pipeline civil works	20
PMASUP243	Monitor and maintain pipeline coatings	20
PMASUP244	Prepare and isolate plant	50
PMASUP245	Break and make flanged joints using hand tools	30
PMASUP246	Disconnect and reconnect non-flared tube fitting joints	30
PMASUP305	Operate offshore cranes	80
PMASUP311	Operate communications hub	40
PMASUP341	Monitor and maintain instrument and control systems	40
PMASUP342	Monitor and maintain electrical systems	40
PMASUP343	Monitor and maintain cathodic protection systems	20
PMASUP344	Monitor and control repairs and modifications on operational pipe	40
PMASUP345	Monitor vibration	60
PMASUP346	Control corrosion	40
PMASUP347	Undertake corrosion inspection on process plant	40
PMASUP410	Develop plant documentation	30
PMASUP420	Minimise environmental impact of process	40
PMASUP432	Coordinate pipeline projects	40
PMASUP440	Commission/recommission plant	40
PMASUP441	Decommission plant	20
PMASUP444	Plan plant preparation and isolation	50
PMASUP445	Participate in HAZOP studies	40

Unit Code	Unit Title	Nominal Hours
PMA5UP520	Review procedures to minimise environmental impact of process	40
PMA5UP540	Analyse equipment performance	50
PMA5UP620	Manage environmental management system	60
PMAWHS211	Prepare equipment for emergency response	20
PMAWHS213	Undertake fire control and emergency rescue	15
PMAWHS214	Undertake helicopter safety and escape	30
PMAWHS215	Apply offshore facility abandonment and sea survival procedures and practices	20
PMAWHS221	Maintain first aid resources and records	10
PMAWHS310	Investigate incidents	30
PMAWHS311	Lead emergency teams	20
PMAWHS312	Command the operation of survival craft	40
PMAWHS320	Provide advanced first aid response	20
PMAWHS321	Provide first aid response in remote and/or isolated area	25
PMAWHS420	Develop first aid procedures and manage resources	40
PMAWHS502	Contribute to safety case	40
PMAWHS511	Manage emergency incidents	40

SAMPLE TRAINING PROGRAMS

A range of Sample Training Plans have been provided to demonstrate the flexibility of qualifications contained in the **PMA Chemical, Hydrocarbons and Refining Training Package**, but are by no means mandatory.

Occupation / Work Function	Process Plant Assistant	
Qualification Title	Certificate II in Process Plant Operations	
Qualification Code	PMA20116	
Description	Appropriate for a person working as a plant operator in a chemical processing or refining enterprise.	
Comments	16 units required	
Unit Code	Unit Title	Hours
Core		
MSMENV272	Participate in environmentally sustainable work practices	30
MSMSUP100	Apply workplace context to own job	20
MSMSUP102	Communicate in the workplace	20
MSMWHS110	Follow emergency response procedures	20
MSMWHS200	Work safely	30
Electives		
MEM09002B	Interpret technical drawing	80
MSMOPS200	Operate equipment	40
MSMSUP292	Sample and test materials and product	40
MSS402081	Contribute to the application of a proactive maintenance strategy	50
PMAOPS201	Operate fluid flow equipment	60
PMAOPS204	Select and use utilities and services	40
PMAOPS216	Operate local control system	40
PMAOPS217	Operate wet milling equipment	40
PMAOPS232	Operate filtration equipment	40
PMASUP244	Prepare and isolate plant	50
PMC552003	Operate grinding equipment	40
	Total	640

Occupation / Work Function	Process Plant Operator	
Qualification Title	Certificate III in Process Plant Operations	
Qualification Code	PMA30116	
Description	Appropriate for a person working as a plant operator in a chemical processing or refining enterprise.	
Comments	21 units required	
Unit Code	Unit Title	Hours
Core		
MSMENV272	Participate in environmentally sustainable work practices	30
MSMSUP100	Apply workplace context to own job	20
MSMSUP102	Communicate in the workplace	20
MSMWHS110	Follow emergency response procedures	20
MSMWHS200	Work safely	30
Electives		
MSL952001	Collect routine site samples	40
MSMOPS102	Perform tasks to support production	40
MSMOPS200	Operate equipment	40
MSMSUP291	Participate in continuous improvement	40
MSMSUP300	Identify and apply process improvements	40
MSMSUP303	Identify equipment faults	40
MSMSUP330	Develop and adjust a production schedule	40
MSMSUP383	Facilitate a team	40
MSMSUP390	Use structured problem-solving tools	40
MSS402002	Sustain process improvements	50
MSS402051	Apply quality standards	40
MSS402081	Contribute to the application of a proactive maintenance strategy	50
PMAOPS300	Operate a production unit	40
PMAOPS305	Operate process control systems	60
PMAOPS319	Adjust batch	40
PMC552002	Operate equipment to blend/mix materials	40
	Total	800

Occupation / Work Function	Plant Technician	
Qualification Title	Certificate IV in Process Plant Operations	
Qualification Code	PMA40116	
Description	Appropriate for a person working as a plant technician in a chemical processing or refining enterprise.	
Comments	26 Units required	
Unit Code	Unit Title	Hours
Core		
MSMENV272	Participate in environmentally sustainable work practices	30
MSMSUP100	Apply workplace context to own job	20
MSMSUP102	Communicate in the workplace	20
MSMWHS110	Follow emergency response procedures	20
MSMWHS200	Work safely	30
Electives		
MSMENV472	Implement and monitor environmentally sustainable work practices	50
MSMOPS400	Optimise process/plant area	60
MSMOPS401	Trial new process or product	40
MSS402002	Sustain process improvements	50
MSS402081	Contribute to the application of a proactive maintenance strategy	50
MSS403002	Ensure process improvements are sustained	40
MSS403013	Lead team culture improvement	60
MSS403030	Improve cost factors in work practices	50
MSS403051	Mistake proof an operational process	40
MSS404050	Undertake process capability improvements	50
MSS404052	Apply statistics to operational processes	40
MSS404060	Facilitate the use of planning software systems in a work area or team	50
MSS404081	Undertake proactive maintenance analyses	50
MSS404082	Assist in implementing a proactive maintenance strategy	60
PMAOPS305	Operate process control systems	60
PMAOPS405	Operate complex control systems	80
PMAOPS411	Manage plant shutdown and restart	40
PMASUP440	Commission/recommission plant	40
PMASUP444	Plan plant preparation and isolation	80
TAEASS301	Contribute to assessment	40
TAEDL301	Provide work skill instruction	40
	Total	1160

Occupation/Work Function	Technical Team Leader/Emergency Response Coordinator	
Qualification Title	Diploma of Process Plant Technology	
Qualification Code	PMA50116	
Description	Appropriate for a person working as a technical team leader and coordinating emergency response in a chemical or refining enterprise.	
Comments	10 Units required	
Unit Code	Unit Title	Hours
Core		
MSMENV272	Participate in environmentally sustainable work practices	30
MSMSUP200	Achieve work outcomes	30
MSMSUP210	Process and record information	30
MSMWHS200	Work safely	30
Electives		
MSMWHS510	Manage risk	60
PMAOMIR407	Audit incident preparedness and established response systems	80
PMAOPS405	Operate complex control systems	80
PMAOPS500	Optimise production systems	100
PMAOPS501	Provide operational expertise to a project team	80
PMAOPS505	Control the process during abnormal situations	80
	Total	600

Occupation/Work Function	Operation's Manager	
Qualification Title	Advanced Diploma of Process Plant Technology	
Qualification Code	PMA60116	
Description	Appropriate for a person working as an operation's manager in a chemical processing or refining enterprise.	
Comments	15 Units required	
Unit Code	Unit Title	Hours
Core		
MSMENV272	Participate in environmentally sustainable work practices	30
MSMSUP200	Achieve work outcomes	30
MSMSUP210	Process and record information	30
MSMWHS200	Work safely	30
Electives		
MSMOPS400	Optimise process/plant area	60
MSMOPS601	Design equipment and system modifications	80
MSS403013	Lead team culture improvement	60
MSS404082	Assist in implementing a proactive maintenance strategy	60
MSS405060	Develop the application of enterprise control systems in an organisation	60
PMAOMIR407	Audit incident preparedness and established response systems	80
PMAOMIR512	Establish incident response preparedness and response systems	70
PMAOMIR650	Manage a crisis	80
PMAOPS405	Operate complex control systems	80
PMAOPS500	Optimise production systems	100
PMAOPS505	Control the process during abnormal situations	80
	Total	930

CONTACTS AND LINKS

Curriculum Maintenance Manager (CMM)		
General Manufacturing	The CMM service is provided by Executive Officers located within Victorian TAFE institutes on behalf of the Higher Education and Skills Group.	Paul Saunders: Address: Chisholm Institute, PO Box 684, Dandenong, Vic. 3175. Phone/fax: 9238 8448 / 9238 8504 Email: Paul.Saunders@chisholm.edu.au
Service Skills Organisation		
Manufacturing Skills Australia	This SSO is responsible for developing this PMA Chemical, Hydrocarbons and Refining 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		
Department of Education and Training	The Department of Education and Training provides a range of services and resources to assist in delivery of Training Packages. Search the Department of Education and Training website for links to a range of relevant resources and publications.	http://education.gov.au/
State Government		
Department of Education and Training (DET)	DET is responsible for funding and the implementation of Vocational Education and Training (VET) in Victoria, including Apprenticeships and Traineeships policy.	(03) 9637 2000 www.education.vic.gov.au
National VET Regulatory Authority		
Australian Skills Quality Authority (ASQA)	ASQA is the national regulator for Australia's VET sector.	Info line: 1300 701 801 www.asqa.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
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.
Maximum Payable Hours	The maximum number of hours the Victorian Government will subsidise under the Victorian Training Guarantee for the achievement of the minimum realistic vocational outcome of the qualification, as determined by the qualification packaging rules. The Maximum Payable Hours do not cover every possible combination of core and elective units available for a specific qualification.
Minimum Payable Hours	The number of hours the Victorian government designates as the minimum required to deliver a qualification, taking into account contextualisation and integrated delivery efficiencies.
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.
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