Victorian Purchasing Guide

PMA Chemical, Hydrocarbons and Refining
Training Package

Release 2.3

October 2022

© State of Victoria (Department of Education and Training) 2022



Victorian Purchasing Guides are provided under a Creative Commons Attribution-No Derivatives 4.0 International licence. You are free to re-use the work under that licence, on the condition that you credit the State of Victoria (Department of Education and Training), provide a link to the licence, indicate if changes were made, and comply with all other licence terms. You must not distribute modified material. See: [Creative Commons Attribution NoDerivatives 4.0 International](https://creativecommons.org/licenses/by-nd/4.0/)

The licence does not apply to:

* any images, photographs, trademarks or branding, including the Victorian Government logo and the DET logo; and
* content supplied by third parties.

Copyright queries may be directed to copyright@education.vic.gov.au

**Disclaimer**

In compiling the information contained in and accessed through this resource, the Department of Education and Training 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 - Release History

Note: RTOs should refer to the [National Register](https://training.gov.au/Home/Tga) for the detail of changes in each Release.

| Training Package Release | Date VPG Approved | Comments |
| --- | --- | --- |
| Release 2.3 | 5 October 2022 | Release 2.3 of the PMA Chemical, Hydrocarbons and Refining Training Package reflects the industry request to reinstate ten units of competency previously deleted under Release 2.1 below, as follows:* PMASMELT260 Form carbon anodes
* PMASMELT261 Bake carbon anodes
* PMASMELT262 Clean and strip anode rods
* PMASMELT263 Spray carbon anodes
* PMASMELT264 Start up reduction cells
* PMASMELT266 Deliver molten metal
* PMASMELT267 Cast ingots
* PMASMELT268 Operate vertical direct casting process
* PMASMELT269 Operate cell tending equipment
* PMASMELT270 Supply product from reduction cells

For detailed mapping of qualifications and units between PMA Release 2.3 and PMA Release 2.1, please refer to the PMA Chemicals, Hydrocarbons and Refining Training Package Implementation Guide [Companion Volume](https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=9fc2cf53-e570-4e9f-ad6a-b228ffdb6875) Note: A VPG was not issued for minor release 2.2 updating the imported unit HLTAID003 to HLTAID011 and prerequisites that included the Provide First Aid unit, as directed by the Australian Industry and Skills Committee (1 December 2021). |
| Release 2.1 | 28 May 2021 | Minor Release 2.1 of the PMA Chemical, Hydrocarbons and Refining Training Package reflects the deletion of training products with low or no enrolments as instructed by the Commonwealth Skills Minister and authorised by the AISC Communiques issued on 2 December 2020 and confirmed on 23 February 2021. Thirty-seven (37) units of competency have been deleted.For detailed mapping of qualifications and units between PMA Release 2.1 and PMA Release 2.0, please refer to the PMA Chemicals, Hydrocarbons and Refining Training Package Implementation Guide [Companion Volume](https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=9fc2cf53-e570-4e9f-ad6a-b228ffdb6875)  |
| Release 2.0 | 9 February 2021 | Release 2 of the PMA Chemical, Hydrocarbons and Refining Training Package reflects the update of PMA30120 Certificate III in Process Plant Operations which now includes seven new Gas/LNG specialisations.For detailed mapping of qualifications and units between PMA Release 2.0 and PMA Release 1.0, please refer to the PMA Chemicals, Hydrocarbons and Refining Training Package Implementation Guide [Companion Volume](https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=9fc2cf53-e570-4e9f-ad6a-b228ffdb6875) |
| Release 1.0 | 7 July2016 | 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. * PMA70108 Graduate Certificate in Surface Coating Technology is not carried forward.

This Victorian Purchasing Guide also reflects the changes made from Maximum Nominal Hours to Maximum and Minimum Payable Hours.For detailed mapping of qualifications and units between PMA R 1.0 and PMA08 please refer to the PMA Chemicals, Hydrocarbons and Refining Training Package Implementation Guide [Companion Volume](https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=9fc2cf53-e570-4e9f-ad6a-b228ffdb6875) |

Contents

[Introduction 1](#_Toc90471432)

[What is a Victorian Purchasing Guide? 1](#_Toc90471433)

[Registration 1](#_Toc90471434)

[Transition 1](#_Toc90471435)

[Qualifications 2](#_Toc90471436)

[Units of Competency and Nominal Hours 3](#_Toc90471437)

[Contacts and Links 11](#_Toc90471438)

[Glossary 13](#_Toc90471439)

# 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 maximum and minimum payable hours available for each qualification.
* Nominal hours for each unit of competency within the Training Package.

## 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 Qualifications Framework (AQF).

The VRQA is the regulatory authority in Victoria responsible for the registration of Vocational Education and Training (VET) providers who offer courses to domestic students in Victoria only.

ASQA is the regulatory authority responsible for the registration of VET providers who offer training in Victoria, nationally and / or internationally.

## Transition

The relationship between new units and any superseded or replaced units from the previous version of PMA Chemical, Hydrocarbons and Refining Training Package Release 2.3 is provided in the Training Package Companion Volume Implementation Guide. (See [VETnet.gov.au](https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=9fc2cf53-e570-4e9f-ad6a-b228ffdb6875) for more information).

Information regarding transition arrangements can be obtained from the state or national VET Regulatory Authority (see Contacts and Links section).

RTOs must ensure that all training and assessment leading to issuance of qualifications or Statements of Attainment from the PMA Chemical, Hydrocarbons and Refining Training Package Release 2.3 is conducted against the Training Package units of competency and complies with the assessment requirements.

# Qualifications

| Code | Title | Minimum Payable Hours | Maximum Payable Hours |
| --- | --- | --- | --- |
| PMA20116 | Certificate II in Process Plant Operations | 608 | 640 |
| PMA30120 | 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

| 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 |
| PMAOMIR306 | Operate control panel during an emergency | 50 |
| PMAOMIR317 | Facilitate search and rescue operations | 40 |
| PMAOMIR322 | Manage incident response information | 40 |
| PMAOMIR323 | 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 |
| PMAOMIR512 | Establish incident response preparedness and response systems | 70 |
| 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 |
| PMAOPS213 | Package product/material | 20 |
| PMAOPS216 | Operate local control system | 40 |
| 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 |
| 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 |
| PMAOPS264 | Operate solvent extraction equipment | 30 |
| PMAOPS280 | Interpret process plant schematics | 20 |
| PMAOPS306 | Operate and troubleshoot production unit | 40 |
| PMAOPS309 | Operate solids handling/storage facility | 40 |
| PMAOPS310 | Operate and troubleshoot distillation system | 40 |
| PMAOPS311 | Operate and troubleshoot reactors and reaction equipment | 40 |
| PMAOPS313 | Operate and troubleshoot furnaces to induce reaction | 50 |
| PMAOPS314 | Operate and troubleshoot compressor systems | 30 |
| PMAOPS315 | Operate and troubleshoot process control systems | 60 |
| PMAOPS316 | Organise storage and logistics of general materials | 20 |
| PMAOPS317 | Undertake ship transfer operations | 40 |
| PMAOPS318 | Conduct artificial lift | 20 |
| PMAOPS319 | Adjust batch | 40 |
| PMAOPS322 | Undertake well management | 40 |
| PMAOPS328 | Operate and troubleshoot heating furnace | 40 |
| PMAOPS331 | Operate and troubleshoot gas turbine system | 50 |
| PMAOPS332 | Generate electrical power | 30 |
| PMAOPS334 | Operate and troubleshoot gas absorption system | 40 |
| PMAOPS336 | Operate and troubleshoot fixed-bed adsorption system | 40 |
| PMAOPS337 | Operate and troubleshoot liquid extraction system | 40 |
| PMAOPS338 | Communicate and monitor pipeline activities | 40 |
| PMAOPS339 | Operate and troubleshoot wells and gathering systems | 30 |
| PMAOPS341 | Operate and troubleshoot cryogenic processes | 40 |
| PMAOPS342 | Conduct pipeline pigging | 20 |
| PMAOPS343 | Transfer bulk fluids into/out of storage facility | 40 |
| PMAOPS344 | Operate and troubleshoot flare systems | 40 |
| PMAOPS345 | Operate and troubleshoot gas treatment process | 60 |
| PMAOPS346 | Operate and troubleshoot liquefaction process | 40 |
| PMAOPS347 | Create and conduct isolations in the workplace | 60 |
| PMAOPS348 | Operate safety, protection and shutdown systems | 50 |
| PMAOPS349 | Operate and troubleshoot hydraulic systems | 40 |
| PMAOPS350 | Match and adjust colour | 50 |
| PMAOPS351 | Operate and troubleshoot turret swivel systems | 40 |
| PMAOPS352 | Operate and troubleshoot instrument and plant air systems | 40 |
| PMAOPS353 | Operate and troubleshoot heating, ventilation and air conditioning systems | 60 |
| PMAOPS354 | Operate and troubleshoot inert gas generation systems | 40 |
| PMAOPS355 | Operate and troubleshoot fuel systems | 40 |
| PMAOPS356 | Operate and troubleshoot water treatment systems | 60 |
| PMAOPS357 | Operate and troubleshoot produced water and water injection systems | 40 |
| PMAOPS358 | Process design fundamentals | 40 |
| PMAOPS359 | Operate and troubleshoot process measurement and control systems | 40 |
| PMAOPS363 | Operate and troubleshoot export systems | 30 |
| PMAOPS367 | Operate and troubleshoot cooling water systems | 40 |
| PMAOPS368 | Operate and troubleshoot heating medium/hot oil systems | 40 |
| PMAOPS369 | Operate and troubleshoot drain and vent systems | 30 |
| PMAOPS370 | Operate and troubleshoot condensate stabilisation systems | 40 |
| PMAOPS390 | Operate a biochemical process | 40 |
| PMAOPS402 | Respond to abnormal process situations | 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 |
| PMAOPS600 | Modify plant | 60 |
| PMAOPS601 | Debottleneck plant | 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 |
| PMASUP345 | Monitor vibration | 60 |
| PMASUP348 | Monitor and maintain cathodic protection systems | 20 |
| PMASUP349 | Monitor and control repairs and modifications on operational pipe | 40 |
| PMASUP350 | Control corrosion | 40 |
| PMASUP410 | Develop plant documentation | 30 |
| PMASUP420 | Minimise environmental impact of process | 40 |
| PMASUP440 | Commission/recommission plant | 40 |
| PMASUP441 | Decommission plant | 20 |
| PMASUP444 | Plan plant preparation and isolation | 50 |
| PMASUP445 | Participate in HAZOP studies | 40 |
| PMASUP520 | Review procedures to minimise environmental impact of process | 40 |
| PMASUP540 | Analyse equipment performance | 50 |
| 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 |
| PMAWHS310 | Investigate incidents | 30 |
| PMAWHS311 | Lead emergency teams | 20 |
| PMAWHS312 | Command the operation of survival craft | 40 |
| PMAWHS320 | Provide advanced first aid response | 20 |
| PMAWHS502 | Contribute to safety case | 40 |
| PMAWHS511 | Manage emergency incidents | 40 |

# Contacts and Links

Curriculum Maintenance Manager (CMM) Service

General Manufacturing

The CMM Service is provided on behalf of Higher Education and Skills.

CMM Service Executive Officers can assist with questions on payable and nominal hours.

Paul Saunders:

Chisholm Institute

Address: PO Box 684, Dandenong, Vic. 3175

Phone: 03 9238 8448

Email: paul.saunders@chisholm.edu.au

Service Skills Organisation (SSO) - Innovation & Business Skills Australia (IBSA)

Innovation & Business Skills Australia (IBSA) is responsible for developing the MST Textiles, Clothing and Footwear Training Package and can be contacted for further information.

Address: Level 5, 534 Church Street,

Cremorne Vic. 3121.

Phone: 03 9815 7099

Email: manufacturing@ibsa.org.au

Website: IBSA.org.au

National Register of VET in Australia - Training.gov.au (TGA)

TGA is the Australian government’s official National Register of information on Training Packages, qualifications, courses, units of competency and RTOs. See [training.gov.au](http://training.gov.au/) for more information.

Australian Government - Department of Education, Skills and Employment

The Commonwealth Department is responsible for national policies and programmes that help Australians access quality vocational education and training. See [dese.gov.au](https://www.dese.gov.au/) for more information.

State Government - Department of Education and Training (DET)

DET is the State Training Authority responsible for supporting implementation of Vocational Education and Training (VET) in Victoria. See [education.vic.gov.au](http://www.education.vic.gov.au/) for more information. (03) 9637 2000

National VET Regulatory Authority - Australian Skills Quality Authority (ASQA)

ASQA is the national regulator for Australia’s VET sector. Info line: 1300 701 801 See [asqa.gov.au](http://www.asqa.gov.au/) for more information.

State VET Regulatory Authority - Victorian Registration and Qualifications Authority (VRQA)

The VRQA is a statutory authority responsible for the registration and regulation of Victorian RTOs and for the regulation of apprenticeships and traineeships in Victoria. (03) 9637 2806 See [vrqa.vic.gov.au](http://www.vrqa.vic.gov.au/)

Industry Regulatory Bodies

WorkSafe Victoria

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.

WorkSafe needs to provide written verification before high risk work units can be added to an RTO’s scope of registration. info@worksafe.vic.gov.au See [worksafe.vic.gov.au](http://www.worksafe.vic.gov.au/) for further information.

222 Exhibition Street,

Melbourne 3000

(03) 9641 1444 or

1800 136 089 (toll free)

info@worksafe.vic.gov.au

See [worksafe.vic.gov.au](http://www.worksafe.vic.gov.au/) for further information.

# 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 Skills First funding 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 reflect a calculated minimum number of hours that could deliver a minimum realistic vocational outcome, based on efficiencies of contextualisation and integration.

**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** Nominal hours reflect the anticipated time taken to deliver and assess the outcomes of a unit of competency excluding unsupervised delivery or the time taken for repeated practical application of skills. Nominal hours are determined by the Victorian State Training Authority (DET) and are primarily developed for funding purposes in Victoria.