



22701VIC Certificate II in Plumbing (Pre-apprenticeship)

Version 1.1 – 4 February 2026

**This course has been accredited under Part 4.4 of the
*Education and Training Reform Act 2006.***

**Accredited for the period: 1 January 2026 to 31 December
2030**

Version history

Version number	Details	Date approved
1.1	Minor amendment – typographical error and updated contact information A2 and A5	4 February 2026
1.0	Reaccreditation	18 August 2025

Table of contents

Section A – Copyright and course classification information	1
1. Copyright owner of the course	1
2. Address	1
3. Type of submission	1
4. Copyright acknowledgement.....	2
5. Licensing and franchise	2
6. Course accrediting body	3
7. AVETMISS information	3
8. Period of accreditation	3
Section B – Course information	4
1. Nomenclature.....	4
1.1 Name of the qualification.....	4
1.2 Nominal duration of the course	4
2. Vocational or educational outcomes.....	4
2.1 Outcome(s) of the course.....	4
2.2 Course description	4
3. Development of the course.....	5
3.1 Industry, education, legislative, enterprise or community needs.....	5
3.2 Review for re-accreditation.....	6
4. Course outcomes	10
4.1 Qualification level.....	10
4.2 Foundation skills	10
4.3 Recognition given to the course (if applicable)	11
4.4 Licensing/regulatory requirements (if applicable)	11
5. Course rules.....	12
5.1 Course structure	12
5.2 Entry requirements.....	13
6. Assessment.....	14
6.1 Assessment strategy.....	14
6.2 Assessor competencies	15
7. Delivery	15
7.1 Delivery modes	15
7.2 Resources.....	16
8. Pathways and articulation.....	17
9. Ongoing monitoring and evaluation	17
Section C – Units of competency	18

4. Copyright acknowledgement

- The following unit/s of competency:
 - CPCWHS1001 Prepare to work safely in the construction industry
 - CPCCWHS2001 Apply WHS requirements, policies and procedures in the construction industry
 - CPCCOM1015 Carry out measurements and calculations
 - CPCPCM2039 Carry out interactive workplace communication
 - CPCCOM2001 Read and interpret plans and specifications
 - have been imported from the CPC Construction, Plumbing and Services Training Package administered by the Commonwealth of Australia.
 - The following unit of competency:
 - BSBWRT311 Write simple documents
 - has been imported from the BSB Business Services Training Package administered by the Commonwealth of Australia.
 - The following unit of competency:
 - CUAACD313 Produce technical drawings
 - has been imported from the CUA Creative Arts and Culture Training Package administered by the Commonwealth of Australia.
 - The following unit of competency:
 - HLTAID010 Provide basic emergency life support
- has been imported from the HLT Health Training Package administered by the Commonwealth of Australia.
- © Commonwealth of Australia

5. Licensing and franchise

Copyright of this material is reserved to the Crown in the right of the State of Victoria. © State of Victoria (Department of Jobs Skills Industry and Regions) 2025.

This work is licensed under a Creative Commons Attribution-No Derivatives 4.0 International license (see [Creative Commons](#) for more information).

You are free to re-use the work under that on the condition that you credit the State of Victoria (Department of Jobs Skills Industry and Regions) provide a link to the license, indicate if changes were made and comply with all other license terms. You must not distribute modified material. Request for other use should be addressed to:

Request for other use should be addressed to:

Deputy CEO

Victorian Skills Authority

Department of Jobs, Skills, Industry and Regions (DJSIR)

	GPO Box 4509 Melbourne Vic 3001 Email: course.enquiry@djsir.vic.gov.au	
6. Course accrediting body	Victorian Registration and Qualifications Authority	
7. AVETMISS information	OSCA code	363131 Plumber (General)
	ASCED code	0403 Building
	National course code	22701VIC
8. Period of accreditation	1 January 2026 to 31 December 2030	

Section B – Course information

1. Nomenclature	Standard 4.1 and 5.8 AQTF 2021 Standards for Accredited Courses
1.1 Name of the qualification	Certificate II in Plumbing (Pre-apprenticeship)
1.2 Nominal duration of the course	492 hours
2. Vocational or educational outcomes	Standard 5.1 AQTF 2021 Standards for Accredited Courses
2.1 Outcome(s) of the course	<p>The Certificate II in Plumbing (Pre-apprenticeship) aims to prepare learners with the knowledge and skills required to enter an apprenticeship (Certificate III in Plumbing) in one of the various sectors of the Plumbing Industry that includes:</p> <ul style="list-style-type: none"> • general plumbing • drainage • gasfitter • mechanical services • roofing. <p>The course outcomes include:</p> <ul style="list-style-type: none"> • communicating effectively in the workplace • identifying employment opportunities and pathways in the plumbing industry • interpreting basic plans and drawings • applying basic leveling procedures • carrying out basic measurements and calculations • working safely and sustainably in the plumbing industry • selecting and using the appropriate tools, equipment and materials to perform basic plumbing tasks. <p>The outcomes of the of the Certificate II in Plumbing (Pre-apprenticeship) does not meet the requirements for a registered plumber.</p>
2.2 Course description	<p>The Certificate II in Plumbing (Pre-apprenticeship) aims to prepare graduates with the skills and knowledge for entry into an apprenticeship (Certificate III in Plumbing) in one of the various sectors of the plumbing industry. The outcome of the Certificate II in Plumbing (Pre-apprenticeship) does not meet the requirements for a registered plumber.</p>

3. Development of the course	Standards 4.1, 5.1, 5.2, 5.3 and 5.4 AQTF 2021 Standards for Accredited Courses
<p>3.1 Industry, education, legislative, enterprise or community needs</p>	<p>The Victorian Skills Authority (VSA) employment projection dashboard indicates there will be a 2.5% growth for the period 2024-2027. This equates to 3,561 new plumbers entering the industry by 2027. The course is included on the Victorian Government, Skills First Training Needs List (TNL) and as a Free TAFE Apprenticeship pathway course to address the construction industry workforce gap and demand to meet the Victorian Housing Statement.</p> <p>The Australian Plumbing Industry is a highly regulated sector, and the occupation of 'plumbing' is licensed and registered through acts of law. The industry has had a long association with, and offers considerable support for, pre-apprenticeship training.</p> <p>The Certificate II in Plumbing (Pre-apprenticeship), which has had multiple accreditation cycles, continues to be the preferred pre-apprenticeship program for the Victorian Plumbing Industry with future demand continuing to be strong. Previous course reaccreditation processes have attracted strong interest from the major industry stakeholders. Involvement in course development by the Master Plumbers Association, Plumbing Trades Employees Union, Air-Conditioning and Mechanical Contractors Association, Victorian Building Authority and a range of employers, ensures contemporary practices are incorporated to produce work ready graduates.</p> <p>Whilst the pre apprenticeship course is not the only pathway to employment, stakeholders encourage new entrants to have a range of basic skills that promote safety and an understanding of how the industry works, before commencing a full- time apprenticeship. This course supports the development of these skills.</p> <p>Typical learners who undertake the Certificate II in Plumbing (Pre-apprenticeship) include:</p> <ul style="list-style-type: none"> • school leavers aiming to enter one of the occupational streams within the Plumbing Industry • secondary students completing a Victorian Certificate of Education (VCE) VET program which contributes to the VCE, VCE Vocational Major (VM) or the Victorian Pathways Certificate (VPC) commonly undertaken in years 10, 11 or 12. <p>Currently there are 24 Registered Training Organisations (RTOs) listed on the national register (training.gov.au) with scope to deliver 22569VIC Certificate II in Plumbing (Pre-apprenticeship). These include TAFEs, private training organisations and secondary schools registered as RTOs.</p> <p>The project for the redevelopment of the Certificate II in Plumbing (Pre-apprenticeship) was overseen by a project steering committee comprising of the following industry and RTO representatives:</p> <p>Brendan Gould (Chair) Master Plumbers Victoria</p>

	<p>Danielle McAuliffe Victorian Curriculum and Assessment Authority</p> <p>Glenn Graham Chisholm Institute</p> <p>Kyle Paten A G Coombes Pty Ltd</p> <p>Liam Seale Air Conditioning and Mechanical Contractors' Association.</p> <p>As well as other telephone and email consultations, the members of the project steering committee met formally on two occasions to review and confirm the required skills and knowledge outcomes of the course, course structure and final course reaccreditation submission.</p> <p>The Certificate II Plumbing Moderation and Validation Group consisting of Victorian Plumbing trainers and assessors was consulted and participated in the refinement of the technical content and assessment requirements of the new units.</p> <p>The members of the project steering committee confirm that the proposed course is not covered by a qualification within a training package or:</p> <ul style="list-style-type: none"> • does not duplicate, by title or coverage, the outcomes of an endorsed training package qualification • is not a subset of a single training package qualification that could be recognised through one or more statements of attainment or a skill set • does not include units of competency additional to those in a training package qualification that could be recognised through statements of attainment in addition to the qualification • does not comprise units that duplicate units of competency of a training package qualification.
<p>3.2 Review for re-accreditation</p>	<p>The review and redevelopment of the Certificate II in Plumbing Pre-apprenticeship was informed by the outcomes of monitoring and evaluation, and consultation and validation processes to ensure the course remains relevant and continues to meet the needs of the Victorian Plumbing Industry.</p> <p>The Specialist Skills Advisor carried out the monitoring and evaluation processes for the course during its accreditation period that included consultations with industry, students, graduates and RTOs. Overall, the feedback from these consultations were favourable; the course outcomes and delivery are appropriate to the needs of learners entering the Plumbing Industry.</p> <p>This pre-apprenticeship course consistently attracts high volume enrolment. Data shows 1,268 enrolments in Victoria in 2023, which</p>

increased to 1,311 in 2024. COVID-19 impacted on student numbers negatively during the current accreditation period, but the expectation is the numbers will increase over the next five-year period due to workforce demand and due to free TAFE.

The following table identifies a comparison of enrolments for 22569VIC Certificate II in Plumbing (Pre-apprenticeship) for Government funded, Fee for Service and VET Delivered in Secondary School (VETDSS) programs.

Year	Government subsidy	Fee for service	VETDSS	Total
2021	408	912	1236	2556
2022	290	1152	1150	2592
2023	267	1001	1089	2357
2024	107	742	1209	2058

The course document required changes during its accreditation period. This included minor editorial resulting in Version 1.1 in February 2021 and an update of the course structure to reflect current first aid unit HLTAID010 in September 2022, resulting in Version 2.

No significant changes were required during consultation and validation processes for the course's reaccreditation except in the updating of all enterprise units to reflect the revised Standards for Accredited courses unit template and the inclusion of current versions of endorsed units of competency where they have been updated.

The 22701VIC Certificate II in Plumbing (Pre-apprenticeship) supersedes and is equivalent to 22569VIC Certificate II in Plumbing (Pre-apprenticeship).

The following table shows the unit mapping against 22701VIC and 22569VIC to indicate equivalence and non-equivalence.

Transition table

Unit of competency mapping of existing course structure against the new course structure.

Relationship:

- *Equivalent (E)* – outcomes of unit of competency are equivalent
- *Not equivalent (NE)* – outcomes of unit of competency are not equivalent
- *New (N)* – new unit/newly imported unit of competency
- *Removed (R)* – unit of competency removed/deleted and not replaced

Existing course structure (units of competency)	New course structure (units of competency)	Relationship E/NE/N/R
CPCCWHS1001 Prepare to work safely in the construction industry	CPCWHS1001 Prepare to work safely in the construction industry (Release 2)	E – no change
CPCCWHS2001 Apply WHS requirements, policies and procedures in the construction industry	CPCCWHS2001 Apply WHS requirements, policies and procedures in the construction industry (Release 2)	E – no change
CPCCCM1015 Carry out measurements and calculations	CPCCOM1015 Carry out measurements and calculations (Release 3)	E – updated unit
CPCPCM2039A Carry out interactive workplace communication	CPCPCM2039 Carry out interactive workplace communication	E – updated unit
CPCCCM2001 Read and interpret plans and specifications	CPCCOM2001 Read and interpret plans and specifications (Release 3)	E – updated unit
BSBWRT311 Write simple documents	BSBWRT311 Write simple documents	E – no change
CUAACD303 Produce technical drawings	CUAACD313 Produce technical drawings	E – updated unit
HLTAID010 Provide basic emergency life support	HLTAID010 Provide basic emergency life support	E – no change

VU23046 Apply basic sheet metal practices	VU23978 Apply basic sheet metal practices	E
VU23047 Cut and penetrate building materials and structures	VU23979 Cut and penetrate building materials and structures	E
VU23048 Fabricate simple plumbing pipe systems	VU23980 Fabricate simple plumbing pipe systems	E
VU23049 Identify career pathways in the plumbing industry	VU23981 Identify career pathways in the plumbing industry	E
VU23050 Perform basic oxy-acetylene welding and cutting	VU23982 Perform basic oxy-acetylene welding and cutting	E
VU23051 Prepare to work in the plumbing industry	VU23983 Prepare to work in the plumbing industry	E
VU23052 Use and apply basic levelling equipment for plumbing	VU23984 Use and apply basic levelling equipment for plumbing	E
VU23053 Use basic electric welding equipment and techniques	VU23985 Use basic electric welding equipment and techniques	E
VU23054 Use basic plumbing hand tools	VU23986 Use basic plumbing hand tools	E
VU23055 Use basic power tools	VU23987 Use basic power tools	E
VU23056 Use plumbing pipes, fittings and fixtures to simulate plumbing installations	VU23988 Use plumbing pipes, fittings and fixtures for basic plumbing installations	E Minor title change

4. Course outcomes	Standards 5.5, 5.6 and 5.7 AQTF 2021 Standards for Accredited Courses
<p>4.1 Qualification level</p>	<p>The outcomes of the 22701VIC Certificate II in Plumbing (Pre-apprenticeship) complies with the level 2 specifications of the Australian Qualifications Framework second edition, January 2013.</p> <p>Graduates will have a range of cognitive, technical and communication skills to:</p> <ul style="list-style-type: none"> • perform tasks where the choice between a limited range of options is required (e.g. pipe sizes and lengths) • demonstrate skills and problem-solving techniques where the range of skills and solutions is clearly defined (e.g. select appropriate basic plumbing tools and equipment for use) • demonstrate basic operational knowledge in a moderate range of areas particularly trade-specific skills (e.g. use power tools) • collect, interpret and record information from varied sources (e.g. read and interpret plans and specifications) • take limited responsibility for his or her own productivity in work and learning (e.g. the ability to complete tasks within a given time frame) • develop methods and strategies to obtain employment in the plumbing sector (e.g. resume writing and interview practice). <p>On completion of the Certificate II in Plumbing (Pre-apprenticeship) participants will have the skills and knowledge to:</p> <ul style="list-style-type: none"> • define and use plumbing industry terminology • distinguish plumbing industry streams and opportunities • identify the properties and characteristics of plumbing and building materials • distinguish, select and use plumbing tools for their appropriate application • plan, calculate and mark out basic plumbing tasks • follow work instructions and apply safe working procedures. <p>The volume of learning for this qualification is typically 0.5 to 1 year and incorporates a range of learning activities such as:</p> <ul style="list-style-type: none"> • structured activities to develop the technical skills of the course and the theoretical knowledge that underpins performance • unstructured activities to reinforce and practice skills and research information to complete assignments, collect and consider information about different employment areas and work opportunities.
<p>4.2 Foundation skills</p>	<p>Foundation Skills summary table appears as Appendix.</p>

4.3 Recognition given to the course (if applicable)	N/A
4.4 Licensing/regulatory requirements (if applicable)	There are no licensing or regulatory requirements for this course, however completion of the general construction induction training program is required by anyone visiting a construction site. Achievement of CPCWHS1001 Prepare to work safely in the construction industry meets this requirement. For information visit WorkSafe website here .

5. Course rules	Standards 5.8 and 5.9 AQTF 2021 Standards for Accredited Courses
5.1 Course structure	<p>To be awarded the 22701VIC Certificate II in Plumbing (Pre-apprenticeship) all 19 units of competency must be achieved.</p> <p>All units are core to provide a consistent outcome for graduates with basic skills that allows for employment across all streams of plumbing.</p> <p>Where the full course is not completed a Statement of Attainment will be issued for any completed unit.</p>

Unit of competency code	Unit of competency title	Field of Education code (6-digit)	Pre-requisite	Nominal hours
CPCWHS1001	Prepare to work safely in the construction industry	061301	Nil	6
CPCCWHS2001	Apply WHS requirements, policies and procedures in the construction industry	061301	Nil	20
CPCCOM1015	Carry out measurements and calculations	010101	Nil	20
CPCPCM2039	Carry out interactive workplace communication	120505	Nil	10
CPCCOM2001	Read and interpret plans and specifications	040301	Nil	36
BSBWRT311	Write simple documents	080901	Nil	30
CUAACD313	Produce technical drawings	100501	Nil	50
HLTAID010	Provide basic emergency life support	069907	Nil	12
VU23978	Apply basic sheet metal practices	040327	Nil	50
VU23979	Cut and penetrate building materials and structures	040399	Nil	30

VU23980	Fabricate simple plumbing pipe systems	040327	Nil	30
VU23981	Identify career pathways in the plumbing industry	120501	Nil	30
VU23982	Perform basic oxy-acetylene welding and cutting	040327	Nil	20
VU23983	Prepare to work in the plumbing industry	120599	Nil	20
VU23984	Use and apply basic levelling equipment for plumbing	040301	Nil	8
VU23985	Use basic electric welding equipment and techniques	040327	Nil	20
VU23986	Use basic plumbing hand tools	040327	Nil	50
VU23987	Use basic power tools	040327	Nil	20
VU23988	Use plumbing pipes, fittings and fixtures for basic plumbing installations	040327	Nil	30
Total nominal hours				492

5. Course rules

Standard 5.11 AQTF 2021 Standards for Accredited Courses

5.2 Entry requirements

There are no entry requirements for the 22701VIC Certificate II in Plumbing (Pre-apprenticeship).

Learners enrolling in the 22701VIC Certificate II in Plumbing (Pre-apprenticeship) are best equipped to successfully undertake the course if they have as a minimum, language, literacy and numeracy skills that align to Level 2 of the Australian Core Skills Framework (ACSF). ACSF detail may be accessed from [here](#)

Learners with language, literacy and numeracy skills at a lower level than suggested may require additional support to successfully undertake the qualification.

6. Assessment**Standard 5.12 and 5.14 AQTF 2021 Standards for Accredited Courses****6.1 Assessment strategy**

All assessment, including Recognition of Prior Learning (RPL), must be compliant with the requirements of:

- Standard 1 of the AQTF: Essential Conditions and Standards for Initial/Continuing Registration and Guidelines 4.1 and 4.2 of the VRQA Guidelines for VET Providers,
- or
- the Standards for Registered Training Organisations 2015 (SRTOs),
- or
- the relevant standards and Guidelines for RTOs at the time of assessment.

The nature of work undertaken in the Plumbing Industry is hands-on and practical and therefore, the assessment strategies should reflect this and be designed to:

- cover a range of skills and knowledge required to demonstrate achievement of competency
- be appropriate to the skills, knowledge, methods of delivery and needs and characteristics of learners
- be equitable to all groups of learners
- provide feedback to learners about the outcomes of the assessment process and guidance given for future options
- allow reasonable time to complete a task which specifically reflects the industry context in which the task takes place.

The following assessment methods are appropriate for units of competency in this accredited course:

- written and/or oral questioning to assess required knowledge
- direct observation of practical tasks
- role play/simulated activities
- problem solving activities.

The assessment of practical plumbing specific skills should only occur in a simulated plumbing workplace environment.

Assessment strategies for the imported units from training packages should be consistent with the Assessment Requirements for the relevant training packages.

<p>6.2 Assessor competencies</p>	<p>Assessment must be undertaken by a person or persons according to:</p> <p>Standard 1.4 of the AQTF: Essential Conditions and Standards for Initial/Continuing Registration and Guidelines 3 of the VRQA Guidelines for VET Providers,</p> <p>or</p> <ul style="list-style-type: none"> • the Standards for Registered Training Organisations 2015 (SRTOs), <p>or</p> <ul style="list-style-type: none"> • the relevant standards and Guidelines for RTOs at the time of assessment. <p>In addition, assessors need to hold a trade certificate in plumbing and/or be registered as a plumber.</p> <p>Units of competency imported from training packages must reflect the requirements for assessors specified in that training package.</p>
<p>7. Delivery</p>	<p>Standards 5.12, 5.13 and 5.14 AQTF 2021 Standards for Accredited Courses</p>
<p>7.1 Delivery modes</p>	<p>The 22701VIC Certificate II in Plumbing (Pre-apprenticeship) may be delivered either on a full time or part time basis using a combination of delivery modes, including:</p> <ul style="list-style-type: none"> • face-to-face, classroom-based delivery • practical demonstration • blended or flexible (e-learning) delivery • delivery in a simulated plumbing workplace. <p>The course aims to develop practical competencies within a simulated industry setting. It is recommended that the units in this course be delivered in the order that reflects the sequence of work tasks in industry and that practical exercises take the form of realistic and holistic job tasks to provide the participants with a simulated real-work experience under supervision. Units can be delivered as stand-alone units or combined.</p> <p>Adequate supervision must be provided whenever learners are using tools and/or equipment, working near dangerous machinery or substances or in potentially hazardous environments, particularly as the learners may have little or no experience in work conditions and practices.</p> <p>Consideration of the sequencing of unit delivery is required for the following units: <i>CPCWHS1001 Prepare to work safely in the construction industry</i> and <i>CPCWHS2001 Apply WHS requirements, policies and procedures in the construction industry</i>. It is recommended that these units be delivered in the initial phase of student learning to provide foundational knowledge of workplace and legislative safety requirements.</p>

Learners who engage in Structured Workplace Learning (SWL) recommended in the VCE VET program schedule, as well as other learners, must complete CPCWHS1001 Prepare to work safely in the construction industry prior to visiting a real workplace.

Registered Training Organisations must use additional educational support mechanisms, such as transition classes, mentoring, or counselling to maximise each learner's completion of the course where there may be language, literacy and numeracy gaps and/or the need for any reasonable adjustment that does not compromise the integrity of course. This includes learners from differing cultural backgrounds to learn effectively within an Australian educational context, and persons from an indigenous background in having their cultural traditions respected at all times.

7.2 Resources

Resources that are essential for the delivery of the 22701VIC Certificate II in Plumbing (Pre-apprenticeship) include:

- classroom facilities
- workshop facilities
- a simulated workplace environment
- plumbing materials, tools and equipment
- computers with internet access.

Trainers/assessors should refer to the individual units of competency for specific resource requirements.

Training must be undertaken by a person or persons according to:

Standard 1.4 of the AQTF: Essential Conditions and Standards for Initial/Continuing Registration and Guideline 3 of the VRQA Guidelines for VET Providers,

or

- the Standards for Registered Training Organisations 2015 (SRTOs),

or

- the relevant standards and Guidelines for RTOs at the time of assessment.

In addition, trainers need to hold a trade certificate in plumbing and/or be registered as a plumber.

Units of competency imported from training packages must reflect the requirements for assessors specified in that training package or accredited course.

8. Pathways and articulation	Standard 5.10 AQTF 2021 Standards for Accredited Courses
	<p>The Certificate II in Plumbing (Pre-apprenticeship) includes units of competency from the CPC Construction, Plumbing and Services, CUA Creative Arts and Culture, BSB Business Services and HLT Health training packages. Completion of those units provide credit transfers/pathways into any qualifications or courses containing those units.</p>
9. Ongoing monitoring and evaluation	Standard 5.15 AQTF 2021 Standards for Accredited Courses
	<p>The Specialist Skills Advisor: Vocational Qualifications and Skills Reform for Natural and built environment is responsible for the ongoing monitoring and evaluation of the Certificate II in Plumbing (Pre-apprenticeship).</p> <p>Formal course evaluations will be undertaken halfway through the accreditation period and will be based on student and teacher evaluation surveys and industry stakeholder surveys/consultations.</p> <p>The Victorian Registration and Qualifications Authority (VRQA) will be notified of any significant changes required to the course.</p>

Section C – Units of competency

Units of competency developed for the course

Code	Title
VU23978	Apply basic sheet metal practices
VU23979	Cut and penetrate building materials and structures
VU23980	Fabricate simple plumbing pipe systems
VU23981	Identify career pathways in the plumbing industry
VU23982	Perform basic oxy-acetylene welding and cutting
VU23983	Prepare to work in the plumbing industry
VU23984	Use and apply basic levelling equipment for plumbing
VU23985	Use basic electric welding equipment and techniques
VU23986	Use basic plumbing hand tools
VU23987	Use basic power tools
VU23988	Use plumbing pipes, fittings and fixtures for basic plumbing installations

Units of competency imported from training packages

Code	Title
CPCWHS1001	Prepare to work safely in the construction industry
CPCCWHS2001	Apply WHS requirements, policies and procedures in the construction industry
CPCCOM1015	Carry out measurements and calculations

CPCPCM2039	Carry out interactive workplace communication
CPCCOM2001	Read and interpret plans and specifications
BSBWRT311	Write simple documents
CUAACD313	Produce technical drawings
HLTAID010	Provide basic emergency life support

Section C – Units of competency

Unit code	VU23978
Unit title	Apply basic sheet metal practices
Application	<p>This unit specifies the performance outcomes, skills and knowledge required to cut, join, fabricate and bend sheet metal products for basic plumbing tasks.</p> <p>This unit applies to plumbing pre-apprentices who under close supervision and guidance, develop a defined and limited range of skills and knowledge in preparing them for entering the working environment within the plumbing industry. They use little judgement and follow instructions specified by the supervisor. On entering the industry, it is intended that further training will be required for this specific skill to ensure trade level standard for a registered plumber.</p> <p>No occupational licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.</p>
Pre-requisite Unit(s)	Nil
Competency Field	N/A
Unit Sector	N/A

Element		Performance Criteria	
Elements describe the essential outcomes of a unit of competency.		Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the assessment requirements.	
1	Plan to perform sheet metal practices	1.1	Clarify plans and specifications for sheet metal tasks with the supervisor to determine the designated sequence.
		1.2	Identify workplace safety requirements associated with sheet metal tasks.
		1.3	Identify sustainability requirements associated with sheet metal tasks.
		1.4	Identify quality assurance requirements associated with the tasks.
2	Prepare for sheet metal practices	2.1	Calculate quantities for the task to support efficient cutting and avoid waste.
		2.2	Select and fit the required personal protective equipment for the task.
		2.3	Check tools and equipment for serviceability and report faults to the supervisor.
3	Cut and join sheet metal and sheet metal products	3.1	Mark out materials according to the requirements of the task, plans and specifications.
		3.2	Apply fabrication techniques relevant to sheet metal and sheet metal products for specific tasks.
		3.3	Cut sheet metal to the required shape and dimension using appropriate cutting tools.
		3.4	Select and apply joining methods and compatible materials to comply with the task and specifications.
4	Bend and fold sheet metal and sheet metal products	4.1	Select tools and equipment to make bends and folds that comply with job specifications and plans.
		4.2	Clean and prepare bent and folded sheet metal and sheet metal products for joining.
5	Clean up the work area	5.1	Clean the work area according to workplace procedures.
		5.2	Clean, check for serviceability and store tools and equipment according to workplace procedures.

		5.3	Dispose, recycle or store materials and waste according to workplace procedures.
--	--	-----	--

Range of conditions

N/A

Foundation Skills

Foundation Skills describe the language, literacy, numeracy and employability skills that are essential to performance.

Foundation skills essential to performance in this unit, but not explicit in the performance criteria are listed below.

Skill	Description
Reading skills to:	Interpret information in documents, drawings, specifications and workplace procedures.
Writing skills to:	Take down simple notes during tasks.
Oral communication skills to:	Use questioning and listening to obtain information. Use correct terminology when discussing sheet metal products and sheet metal practices.
Numeracy skills to:	Take and use measurements to calculate quantities of metal sheets.

Unit mapping

Code and title Current version	Code and Title Previous version	Comments
VU23978 Apply basic sheet metal practices	VU23046 Apply basic sheet metal practices	Equivalent

Assessment Requirements Template

Title	Assessment Requirements for VU23978 Apply basic sheet metal practices
Performance Evidence	<p>The learner must demonstrate the ability to complete tasks outlined in the elements, performance criteria and foundation skills of this unit including evidence of the ability to:</p> <ul style="list-style-type: none"> • apply the following sheet metal fabrication techniques using sheet metal: <ul style="list-style-type: none"> • cut and join • bend and fold.
Knowledge Evidence	<p>The learner must be able to apply essential knowledge required to effectively do the tasks outlined in elements, performance criteria and foundation skills of this unit, including knowledge of:</p> <ul style="list-style-type: none"> • sheet metal practices that apply to the plumbing industry • types of specifications and plans used for sheet metal practices • properties and characteristics of sheet metal • terminology used for sheet metal products and practices • fabrication techniques and joining methods used for sheet metal practices • workplace safety requirements and legislation, including personal protective equipment used when applying sheet metal practices • tools and equipment and techniques used for applying sheet metal practices • Australian Standards, plumbing/building codes, legislation and regulations relevant to sheet metal practices • quality assurance requirements and procedures related to sheet metal practices • sustainability principles and requirements related to sheet metal practices.
Assessment Conditions	<p>Skills in this unit must be demonstrated in a simulated plumbing workplace environment that complies with standard and authorised work practices, safety requirements and sustainability constraints.</p> <p>This includes access to:</p> <ul style="list-style-type: none"> • personal protective equipment • tools and equipment for joining, bending and folding sheet metal, including a manual folding machine • range of sheet metals and sheet metal products

- job tasks, specifications, manufacturer instructions and workplace procedures.

Assessor requirements

Assessors must hold a trade certificate in plumbing and/or registration as a plumber.

Section C – Units of competency

Unit code	VU23979
Unit title	Cut and penetrate building materials and structures
Application	<p>This unit specifies the performance outcomes, skills and knowledge required to make basic cuts and penetrations to building materials and structures for a range of simple plumbing jobs.</p> <p>This unit applies to plumbing pre-apprentices who under close supervision and guidance, develop a defined and limited range of skills and knowledge in preparing them for entering the working environment within the plumbing industry. They use little judgement and follow instructions specified by the supervisor. On entering the industry, it is intended that further training will be required for this specific skill to ensure trade level standard for a registered plumber.</p> <p>No occupational licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.</p>
Pre-requisite Unit(s)	Nil
Competency Field	N/A
Unit Sector	N/A

Element		Performance Criteria	
Elements describe the essential outcomes of a unit of competency.		Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the assessment requirements.	
1	Plan to cut or penetrate building materials	1.1	Clarify plans and specifications for building material cutting or penetrating tasks with the supervisor to determine the designated sequence.
		1.2	Identify workplace safety requirements associated with building material cutting or penetrating tasks.
		1.3	Identify sustainability requirements associated with building material cutting or penetrating tasks.
		1.4	Identify quality assurance requirements associated with the tasks.

2	Prepare to cut or penetrate building materials or structures	2.1	Identify type and properties of building materials to be cut or penetrated.
		2.2	Select required tools and equipment to make cuts or penetrations, check for serviceability and report faults to the supervisor.
		2.3	Select and fit the required personal protective equipment relevant to the specific tool, material and task.
		2.4	Assess and check mark outs for obstructions or hazards before making cuts or penetrations.
3	Perform cuts or penetrations to building materials and structures	3.1	Secure materials to make cuts or penetrations.
		3.2	Use cutting or penetrating tools and equipment according to manufacturer specifications.
		3.3	Cut and penetrate materials and structures according to job specifications.
		3.4	Select and apply joining methods and compatible materials to comply with the task and specifications.
		3.5	Check cut or penetration according to specifications and quality assurance procedures.
4	Clean up the work area	4.1	Clean the work area according to workplace procedures.
		4.2	Clean, check for serviceability and store tools and equipment according to workplace procedures.
		4.3	Dispose, recycle or store materials and waste according to workplace procedures.

Range of conditions

N/A

Foundation Skills

Foundation Skills describe the language, literacy, numeracy and employability skills that are essential to performance.

Foundation skills essential to performance in this unit, but not explicit in the performance criteria are listed below.

Skill	Description
Reading skills to:	Interpret information in documents, drawings, specifications and workplace procedures.
Writing skills to:	Take down simple notes during tasks.
Oral communication skills to:	Use questioning and listening to obtain information. Use correct terminology when discussing building materials, structures and cutting and penetrating techniques.
Numeracy skills to:	Measure and mark out cuts and penetrations.

Unit mapping

Code and title Current version	Code and Title Previous version	Comments
VU23979 Cut and penetrate building materials and structures	VU23047 Cut and penetrate building materials and structures	Equivalent

Assessment Requirements Template

Title	Assessment Requirements for VU23979 Cut and penetrate building materials and structures
Performance Evidence	<p>The learner must demonstrate the ability to complete tasks outlined in the elements, performance criteria and foundation skills of this unit including evidence of the ability to:</p> <ul style="list-style-type: none"> • make safe cuts and penetrations to at least three different building materials and to at least two building structures in preparation for plumbing tasks.
Knowledge Evidence	<p>The learner must be able to apply essential knowledge required to effectively do the tasks outlined in elements, performance criteria and foundation skills of this unit, including knowledge of:</p> <ul style="list-style-type: none"> • purpose of cutting and penetrating building materials and structures for plumbing tasks • types and properties of building materials • types and properties of building structures • terminology associated with cutting and penetrating building materials and structures for plumbing tasks • types of specifications and plans used for cutting and penetrating building materials and structures for plumbing tasks workplace safety requirements and legislation, including personal protective equipment used when cutting and penetrating building materials and structures • tools and equipment used for cutting and penetrating building materials and structures • methods of cutting and penetrating building materials and structures • Australian standards, plumbing/building codes, legislation and regulations relevant to cutting and penetrating building materials and structures for plumbing tasks • quality assurance requirements and procedures related to cutting and penetrating building materials and structures • sustainability principles and requirements related to cutting and penetrating building materials and structures.
Assessment Conditions	<p>Skills in this unit must be demonstrated in a simulated plumbing workplace environment that complies with standard and authorised work practices, safety requirements and sustainability constraints.</p> <p>This includes access to:</p>

- personal protective equipment
- tools and equipment for cutting and penetrating building materials and structures
- building materials and structures
- job tasks, specifications, manufacturer instructions and workplace procedures.

Assessor requirements

Assessors must hold a trade certificate in plumbing and/or registration as a plumber.

Section C – Units of competency

Unit code	VU23980		
Unit title	Fabricate simple plumbing pipe systems		
Application	<p>This unit specifies the performance outcomes, skills and knowledge required to distinguish, select and fabricate drainage, water and gas tubing and pipes for simple plumbing tasks.</p> <p>This unit applies to plumbing pre-apprentices who under close supervision and guidance, develop a defined and limited range of skills and knowledge in preparing them for entering the working environment within the plumbing industry. They use little judgement and follow instructions specified by the supervisor. On entering the industry, it is intended that further training will be required for this specific skill to ensure trade level standard for a registered plumber.</p> <p>No occupational licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.</p>		
Pre-requisite Unit(s)	Nil		
Competency Field	N/A		
Unit Sector	N/A		
Element	Performance Criteria		
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the assessment requirements.		
1	Plan to assemble pipes and tubing	1.1	Clarify plans and specifications for the assembling pipes and tubing job with the supervisor to determine the sequence of tasks.
		1.2	Identify workplace requirements associated with assembling pipes and tubes.
		1.3	Identify sustainability requirements associated with the fabrication of plumbing pipe systems.
		1.4	Identify quality assurance requirements according to workplace procedures.

2	Prepare to assemble pipes and tubing	2.1	Select and correctly fit the required personal protective equipment used for joining and bending pipes and tubing.
		2.2	Inspect tubes and pipes to determine that they meet Australian Standards and quality assurance requirements.
		2.3	Select tools and equipment for fabrication and assembly according to the job requirements.
3	Join and bend pipes and tubing	3.1	Use the required fabrication and assembly techniques according to job specifications.
		3.2	Apply testing procedures on fabricated tasks to determine if the completed work is within predetermined tolerances.
4	Clean up the work area	4.1	Clean the work area according to workplace procedures, legislation and regulations.
		4.2	Clean, check for serviceability and store tools and equipment according to workplace procedures.
		4.3	Dispose, recycle or store materials and waste according to workplace procedures.

Range of conditions

N/A

Foundation Skills

Foundation Skills describe the language, literacy, numeracy and employability skills that are essential to performance.

Foundation skills essential to performance in this unit, but not explicit in the performance criteria are listed below.

Skill	Description
Reading skills to:	Interpret information in documents, drawings, specifications and workplace procedures.
Writing skills to:	Take down simple notes during tasks.
Oral communication skills to:	Use questioning and listening to obtain information.

Use correct terminology when discussing the fabrication and assembly of pipes and tubes tasks.

Report work outcomes and faulty tools and equipment.

Numeracy skills to:

Interpret numerical information in documents, drawings and specifications.

Unit mapping

Code and title Current version	Code and Title Previous version	Comments
VU23980 Fabricate simple plumbing pipe systems	VU23048 Fabricate simple plumbing pipe systems	Equivalent

Assessment Requirements Template

Title	Assessment Requirements for VU23980 Fabricate simple plumbing pipe systems
Performance Evidence	<p>The learner must demonstrate the ability to complete tasks outlined in the elements, performance criteria and foundation skills of this unit including evidence of the ability to:</p> <ul style="list-style-type: none"> • safely fabricate, join and test at least two simple pipe systems according to job instructions and specifications.
Knowledge Evidence	<p>The learner must be able to apply essential knowledge required to effectively do the tasks outlined in elements, performance criteria and foundation skills of this unit, including knowledge of:</p> <ul style="list-style-type: none"> • types of specifications and plans used for plumbing pipe systems fabrication • purpose of fabricating simple plumbing pipe systems • properties and characteristic of pipes and tubes • pipe and tube installations in plumbing applications and their function and compliance with plumbing regulations • terminology used when fabricating plumbing pipe systems • workplace safety requirements and legislation, including personal protective equipment used for fabricating plumbing pipe systems • tools and equipment and techniques used for fabricating and assembling plumbing pipe systems • Australian standards, plumbing/building codes, legislation and regulations relevant to fabricating simple plumbing pipe systems • quality assurance requirements and procedures related to plumbing pipe systems • sustainability principles and requirements related to fabricating plumbing pipe systems.
Assessment Conditions	<p>Skills in this unit must be demonstrated in a simulated plumbing workplace environment that complies with standard and authorised work practices, safety requirements and sustainability constraints.</p> <p>This includes access to:</p> <ul style="list-style-type: none"> • personal protective equipment • tools and equipment for fabricating and assembling pipes and fittings • pipes and fittings

- job tasks, specifications, manufacturer instructions and workplace procedures.

Assessor requirements

Assessors must hold a trade certificate in plumbing and/or registration as a plumber.

Section C – Units of competency

Unit code	VU23981		
Unit title	Identify career pathways in the plumbing industry		
Application	<p>This unit specifies the performance evidence, skills and knowledge required to distinguish and determine opportunities and pathways of employment in the plumbing industry.</p> <p>This unit applies to plumbing pre-apprentices who under close supervision and guidance, develop a defined and limited range of skills and knowledge in preparing them for entering the working environment within the plumbing industry. They use little judgement and follow instructions specified by the supervisor. On entering the industry, it is intended that further training will be required for this specific skill to ensure trade level standard for a registered plumber.</p> <p>No occupational licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.</p>		
Pre-requisite Unit(s)	Nil		
Competency Field	N/A		
Unit Sector	N/A		
Element	Performance Criteria		
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the assessment requirements.		
1	Research plumbing history and developments	1.1	Source information on plumbing history and developments to establish past, present and emerging trends in the plumbing industry.
		1.2	Gather and organise information for future reference.
2	Define sectors in the plumbing industry	2.1	Identify different streams and sectors in the plumbing industry to identify options for employment.
		2.2	Identify the range of roles and responsibilities, and key stakeholders in the plumbing industry.

3	Use information to support career pathway opportunities in the plumbing industry	3.1	Identify sources of information that relate to employment opportunities in the plumbing industry.
		3.2	Identify, apply and document methods and strategies to gain or enhance employment opportunities.
		3.3	Use resources to seek employment opportunities in the plumbing industry.

Range of conditions

N/A

Foundation Skills

Foundation Skills describe the language, literacy, numeracy and employability skills that are essential to performance.

Foundation skills essential to performance in this unit, but not explicit in the performance criteria are listed below.

Skill	Description
Reading skills to:	Interpret information in a range of resources, including internet and print media.
Writing skills to:	Take basic notes from research. Present information in an organised manner.
Oral communication skills to:	Use questioning and listening to obtain information.
Digital literacy skills to:	Search the internet to locate web-based resources and store information.

Unit mapping

Code and title Current version	Code and Title Previous version	Comments
VU23981 Identify career pathways in the plumbing industry	VU23049 Identify career pathways in the plumbing industry	Equivalent

Assessment Requirements Template

Title	Assessment Requirements for VU23981 Identify career pathways in the plumbing industry
Performance Evidence	<p>The learner must demonstrate the ability to complete tasks outlined in the elements, performance criteria and foundation skills of this unit including evidence of the ability to:</p> <ul style="list-style-type: none"> • research information about plumbing history and developments from at least two different sources • explore and document at least three different plumbing career pathways based on identified preferences.
Knowledge Evidence	<p>The learner must be able to apply essential knowledge required to effectively do the tasks outlined in elements, performance criteria and foundation skills of this unit, including knowledge of:</p> <ul style="list-style-type: none"> • sources of credible information on the plumbing industry • highlights in the history of plumbing and emerging trends • plumbing industry sectors and the types of jobs in each • sources of advice on career planning • internet research methods • methods and strategies to seek and identify employment opportunities • methods organise information chronologically and sequentially.
Assessment Conditions	<p>Skills in this unit must be demonstrated in a plumbing workplace, a workplace simulated environment or a vocational training context.</p> <p>This includes access to:</p> <ul style="list-style-type: none"> • internet • career planning resources. <p>Assessor requirements</p> <p>No specialist vocational competency requirements for assessors apply to this unit.</p>

Section C – Units of competency

Unit code	VU23982		
Unit title	Perform basic oxy-acetylene welding and cutting		
Application	<p>This unit specifies the performance evidence, skills and knowledge required to use oxy-acetylene equipment to make welds and cuts, and to rectify any defects and distortions as part of plumbing tasks.</p> <p>This unit applies to plumbing pre-apprentices who under close supervision and guidance, develop a defined and limited range of skills and knowledge in preparing them for entering the working environment within the plumbing industry. They use little judgement and follow instructions specified by the supervisor. On entering the industry, it is intended that further training will be required for this specific skill to ensure trade level standard for a registered plumber.</p> <p>No occupational licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.</p>		
Pre-requisite Unit(s)	Nil		
Competency Field	N/A		
Unit Sector	N/A		
Element	Performance Criteria		
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the assessment requirements.		
1	Plan to weld and cut	1.1	Clarify plans and specifications with supervisor to determine the appropriate use of oxy-acetylene and welding and cutting techniques required for the job task.
		1.2	Identify workplace safety and sustainability requirements associated with welding and cutting work.
		1.3	Identify quality assurance requirements according to workplace procedures.
2	Prepare materials and equipment for welding and cutting	2.1	Select, prepare and correctly fit the required personal protective equipment for the task.

		2.2	Select and securely clamp materials prior to welding or cutting to avoid hazard and injury.
		2.3	Apply the required equipment and techniques to meet the specifications and job task.
		2.4	Commission and regulate oxy-acetylene equipment for a specific job according with manufacturer specifications.
3	Weld and cut materials	3.1	Follow quality assurance requirements according to workplace procedures.
		3.2	Follow safety and sustainability requirements associated with the use of oxy-acetylene.
		3.3	Perform welds and cuts according to and job task and to minimise waste.
		3.4	Use sustainable work practices that ensure waste minimisation.
		3.5	Identify defects and distortions and rectify according to the job task.
		3.6	Use tools, equipment and materials appropriately and in sequence with the job task.
		3.7	Clean welds and cuts according to specification.
4	Clean up the work area	4.1	Clean the work area according with workplace procedures.
		4.2	Clean, check for serviceability and store tools and equipment according with workplace procedures.
		4.3	Dispose, recycle or store materials and waste according with workplace procedures.

Range of conditions

N/A

Foundation Skills

Foundation Skills describe the language, literacy, numeracy and employability skills that are essential to performance.

Foundation skills essential to performance in this unit, but not explicit in the performance criteria are listed below.

Skill	Description
Reading skills to:	Interpret information in specifications, drawings, and safety data sheets (SDS).
Writing skills to:	Take down simple notes during tasks.
Oral communication skills to:	Use questioning and listening to obtain information. Use correct terminology when discussing basic oxy-acetylene welding and cutting. Report work outcomes and problems.
Numeracy skills to:	Interpret numerical information in specifications and drawings.

Unit mapping

Code and title Current version	Code and Title Previous version	Comments
VU23982 Perform basic oxy-acetylene welding and cutting	VU23050 Perform basic oxy-acetylene welding and cutting	Equivalent

Assessment Requirements Template

Title	Assessment Requirements for VU23982 Perform basic oxy-acetylene welding and cutting
Performance Evidence	<p>The learner must demonstrate the ability to complete tasks outlined in the elements, performance criteria and foundation skills of this unit including evidence of the ability to:</p> <ul style="list-style-type: none"> • safely set up for oxy-acetylene welding • perform three oxy-acetylene welding for three different tasks. • safely set up for oxy-acetylene cutting • perform oxy-acetylene cutting for three different tasks.
Knowledge Evidence	<p>The learner must be able to apply essential knowledge required to effectively do the tasks outlined in elements, performance criteria and foundation skills of this unit, including knowledge of:</p> <ul style="list-style-type: none"> • purpose and function of oxy-acetylene tools and equipment cutting in the plumbing industry • types of specifications and plans used for plumbing pipe systems fabrication • terminology associated with oxy-acetylene welding and cutting • methods of performing basic oxy-acetylene welding and cutting • workplace safety requirements and legislation, including personal protective equipment used when performing basic oxy-acetylene welding and cutting • tools, equipment, materials and techniques used for performing basic oxy-acetylene welding and cutting • Australian standards, plumbing/building codes, legislation and regulations relevant to basic oxy-acetylene welding and cutting in the plumbing industry • quality assurance requirements and procedures related to basic oxy-acetylene welding and cutting • sustainability principles and requirements related to basic oxy-acetylene welding and cutting in the plumbing industry.
Assessment Conditions	<p>Skills in this unit must be demonstrated in a simulated plumbing workplace environment that complies with standard and authorised work practices, safety requirements and sustainability constraints.</p> <p>This includes access to:</p>

- personal protective equipment
- materials and equipment for oxy-acetylene cutting and welding
- job tasks, specifications, manufacturer instructions and workplace procedures.

Assessor requirements

Assessors must hold a trade certificate in plumbing and/or registration as a plumber.

Section C – Units of competency

Unit code	VU23983		
Unit title	Prepare to work in the plumbing industry		
Application	<p>This unit specifies the performance outcomes, skills and knowledge required to develop a general awareness of the plumbing industry and work as part of a team.</p> <p>This unit applies to plumbing pre-apprentices who under close supervision and guidance, develop a defined and limited range of skills and knowledge in preparing them for entering the working environment within the plumbing industry. They use little judgement and follow instructions specified by the supervisor. On entering the industry, it is intended that further training will be required for this specific skill to ensure trade level standard for a registered plumber.</p> <p>No occupational licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.</p>		
Pre-requisite Unit(s)	Nil		
Competency Field	N/A		
Unit Sector	N/A		
Element	Performance Criteria		
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the assessment requirements.		
1	Access plumbing industry information	1.1	Identify scope and structure of the plumbing industry and stakeholders.
		1.2	Determine registration and licensing requirements of plumbers for specific sectors of the industry.
		1.3	Recognise effective working relationships within the scope of the job role.
		1.4	Identify sources of current legislation, regulations and technical information that relate to plumbing work.

2	Identify own development needs	2.1	Determine skills and knowledge necessary to work effectively in the plumbing industry.
		2.2	Identify own learning needs for future work requirements in consultation with appropriate personnel.
		2.3	Identify opportunities to learn and develop required skills and knowledge for future plumbing industry work prospects.
3	Work safely in a team	3.1	Recognise contributions made by teams to achieving job requirements in the plumbing industry.
		3.2	Follow procedures for workplace plumbing team meetings according to supervisor's instructions.
		3.3	Determine and undertake individual contributions to team activities according to the plumbing job.
		3.4	Identify safe work methods and practices according to workplace procedures and legislative requirements.
		3.5	Refer causes of disharmony and other barriers to achieving the team goals to the appropriate person for resolution.

Range of conditions

N/A

Foundation Skills

Foundation Skills describe the language, literacy, numeracy and employability skills that are essential to performance.

Foundation skills essential to performance in this unit, but not explicit in the performance criteria are listed below.

Skill	Description
Reading skills to:	Interpret information resources regarding plumbing industry registration and licensing requirements.
Writing skills to:	Document industry information from research.
Oral communication skills to:	Use questioning and listening to obtain information.

Use clear language when conveying ideas and information.

Digital literacy skills to:

Use the internet to source industry information and store information.

Unit mapping

Code and title Current version	Code and Title Previous version	Comments
VU23983 Prepare to work in the plumbing industry	VU23051 Prepare to work in the plumbing industry	Equivalent

Assessment Requirements Template

Title	Assessment Requirements for VU23983 Prepare to work in the plumbing industry
Performance Evidence	<p>The learner must demonstrate the ability to complete tasks outlined in the elements, performance criteria and foundation skills of this unit including evidence of the ability to:</p> <ul style="list-style-type: none"> • identify the roles of key plumbing and construction industry stakeholders • identify at least two own individual development needs through observation and/or in consultation with the appropriate person • work collaboratively in a team on a basic plumbing task • participate in a plumbing team meeting.
Knowledge Evidence	<p>The learner must be able to apply essential knowledge required to effectively do the tasks outlined in elements, performance criteria and foundation skills of this unit, including knowledge of:</p> <ul style="list-style-type: none"> • scope of the plumbing industry • types of regulatory information accessible and relevant to plumbers • registration and licensing requirements for plumbers • plumbing industry, regulatory, employer and union stakeholders • team dynamics and working effectively as a team member • processes and procedures for team meetings.
Assessment Conditions	<p>Skills in this unit must be demonstrated in a simulated plumbing workplace environment that complies with standard and authorised work practices, safety requirements and sustainability constraints.</p> <p>This includes access to:</p> <ul style="list-style-type: none"> • plumbing industry information • internet • relevant legislation, Australian Standards and National Construction Code. <p>Assessor requirements</p> <p>Assessors must hold a trade certificate in plumbing and/or registration as a plumber.</p>

Section C – Units of competency

Unit code	VU23984		
Unit title	Use and apply basic levelling equipment for plumbing		
Application	<p>This unit specifies the performance outcomes, skills and knowledge required to select, set up and use suitable basic levelling equipment for simple plumbing jobs.</p> <p>This unit applies to plumbing pre-apprentices who under close supervision and guidance, develop a defined and limited range of skills and knowledge in preparing them for entering the working environment within the plumbing industry. They use little judgement and follow instructions specified by the supervisor. On entering the industry, it is intended that further training will be required for this specific skill to ensure trade level standard for a registered plumber.</p> <p>No occupational licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.</p>		
Pre-requisite Unit(s)	Nil		
Competency Field	N/A		
Unit Sector	N/A		
Element	Performance Criteria		
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the assessment requirements.		
1	Plan and prepare for work	1.1	Clarify type of levelling equipment to be use for levelling task with supervisor.
		1.2	Identify workplace safety requirements associated with using levelling equipment.
		1.3	Identify sustainability requirements associated with levelling tasks.
		1.4	Identify quality assurance requirements for using levelling equipment according to workplace procedures.

2	Set up and use basic levelling equipment	2.1	Identify heights or levels to be transferred or established from project plans or instructions.
		2.2	Set up and test levelling equipment according to manufacturer instructions and workplace instructions.
		2.3	Take, record and mark levels within the required tolerances and specifications according to job requirements and workplace procedures.
		2.4	Identify and apply gradients to tasks according to task specifications.
3	Clean up the work area	3.1	Clean the work area according to workplace procedures, legislation and regulations.
		3.2	Clean, check for serviceability and store tools and equipment according to workplace procedures.
		3.3	Dispose, recycle or store materials and waste according to workplace procedures.

Range of conditions

N/A

Foundation Skills

Foundation Skills describe the language, literacy, numeracy and employability skills that are essential to performance.

Foundation skills essential to performance in this unit, but not explicit in the performance criteria are listed below.

Skill	Description
Reading skills to:	Interpret information in documents, drawings, specifications and workplace procedures.
Writing skills to:	Take down simple notes during tasks.
Oral communication skills to:	Use questioning and listening to obtain information. Use correct terminology when using levelling equipment. Report any faults in levelling equipment.

Numeracy skills to:

Take measurements and make simple calculations.

Unit mapping

Code and title Current version	Code and Title Previous version	Comments
VU23984 Use and apply basic levelling equipment for plumbing	VU23052 Use and apply basic levelling equipment for plumbing	Equivalent

Assessment Requirements Template

Title	Assessment Requirements for VU23984 Use and apply basic levelling equipment for plumbing
Performance Evidence	<p>The learner must demonstrate the ability to complete tasks outlined in the elements, performance criteria and foundation skills of this unit including evidence of the ability to:</p> <ul style="list-style-type: none"> • use at least four of the following basic levelling devices and equipment to identify levels and heights for plumbing related tasks: <ul style="list-style-type: none"> • string line • boning rods • rotating laser level • automatic level • spirit level • water level • calculate the fall of a pipe using gradient 1.65% and 2.5%.
Knowledge Evidence	<p>The learner must be able to apply essential knowledge required to effectively do the tasks outlined in elements, performance criteria and foundation skills of this unit, including knowledge of:</p> <ul style="list-style-type: none"> • purpose and function of levelling equipment for plumbing tasks • terminology associated with levelling equipment • workplace safety requirements and legislation, including personal protective equipment used when using levelling equipment • types of levelling equipment and techniques to use them • purpose of gradients and measurements used • Australian standards, plumbing/building codes, legislation and regulations relevant to levelling tasks • quality assurance requirements and procedures related to levelling tasks • sustainability principles and requirements related to levelling tasks.
Assessment Conditions	<p>Skills in this unit must be demonstrated in a simulated plumbing workplace environment that complies with standard and authorised work practices, safety requirements and sustainability constraints.</p> <p>This includes access to:</p> <ul style="list-style-type: none"> • personal protective equipment • materials and equipment for levelling applications

- job tasks, specifications, manufacturer instructions and workplace procedures.

Assessor requirements

Assessors must hold a trade certificate in plumbing and/or registration as a plumber.

Section C – Units of competency

Unit code	VU23985		
Unit title	Use basic electric welding equipment and techniques		
Application	<p>This unit specifies the performance outcomes, skills and knowledge required to use a range of welding techniques and electric welding tools and equipment, including poly fusion, to weld a variety of materials for plumbing jobs.</p> <p>This unit applies to plumbing pre-apprentices who under close supervision and guidance, develop a defined and limited range of skills and knowledge in preparing them for entering the working environment within the plumbing industry. They use little judgement and follow instructions specified by the supervisor. On entering the industry, it is intended that further training will be required for this specific skill to ensure trade level standard for a registered plumber.</p> <p>No occupational licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.</p>		
Pre-requisite Unit(s)	Nil		
Competency Field	N/A		
Unit Sector	N/A		
Element	Performance Criteria		
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the assessment requirements.		
1	Plan to weld using an electric welder	1.1	Clarify plans and specifications and electric welding techniques to be used for the task with the supervisor.
		1.2	Identify workplace safety requirements associated with electric welding work.
		1.3	Identify sustainability requirements associated with electric welding.
		1.4	Identify quality assurance requirements according to workplace procedures.

		1.5	Select required equipment for the job task.
2	Prepare to weld using an electric welder	2.1	Secure and support materials to facilitate the job task.
		2.2	Obtain equipment and regulate controls appropriately for specific tasks and according to manufacturer specifications.
		2.3	Select, check and correctly fit the required personal protective equipment, relevant to the specific tool or equipment used in the job task.
3	Perform electric welding	3.1	Apply principles of sustainability to welding application.
		3.2	Follow safety and sustainability requirements associated with the use of electrical welding equipment.
		3.3	Use tools, equipment and materials in the predetermined sequence according to the job specification.
		3.4	Use required welding technique according to the work plan and job task.
		3.5	Prepare and clean welds according to the job task.
		3.6	Follow quality assurance requirements according to workplace procedures.
		3.7	Switch power off and safely protect tools and equipment when not in use.
4	Clean up the work area	4.1	Clean the work area according to workplace procedures, legislation and regulations.
		4.2	Clean, check for serviceability and store tools and equipment according to workplace procedures.
		4.3	Dispose, recycle or store materials and waste according to workplace procedures.

Range of conditions

N/A

Foundation Skills

Foundation Skills describe the language, literacy, numeracy and employability skills that are essential to performance.

Foundation skills essential to performance in this unit, but not explicit in the performance criteria are listed below.

Skill	Description
Reading skills to:	Interpret information in documents, drawings, specifications and workplace procedures.
Writing skills to:	Take down simple notes during tasks.
Oral communication skills to:	Use questioning and listening to obtain information. Use correct terminology when discussing the use of basic electric welding equipment and techniques.

Unit mapping

Code and title Current version	Code and Title Previous version	Comments
VU23985 Use basic electric welding equipment and techniques	VU23053 Use basic electric welding equipment and techniques	Equivalent

Assessment Requirements Template

Title	Assessment Requirements for VU23985 Use basic electric welding equipment and techniques
Performance Evidence	<p>The learner must demonstrate the ability to complete tasks outlined in the elements, performance criteria and foundation skills of this unit including evidence of the ability to:</p> <ul style="list-style-type: none"> • safely set up and apply three different welding techniques using an electric welding equipment according to the required plumbing task.
Knowledge Evidence	<p>The learner must be able to apply essential knowledge required to effectively do the tasks outlined in elements, performance criteria and foundation skills of this unit, including knowledge of:</p> <ul style="list-style-type: none"> • purpose and function of using electric welding equipment in the plumbing industry • types of specifications and plans used for electric welding • terminology when using basic electric welding tools and equipment • range of tools and equipment used for electric welding • types of materials used for electric welding • workplace safety requirements and legislation, including personal protective equipment used when using basic electric welding tools and equipment • Australian standards, plumbing/building codes, legislation and regulations relevant to using basic electric welding • quality assurance requirements and procedures related to electric welding • sustainability principles and requirements related to electric welding.
Assessment Conditions	<p>Skills in this unit must be demonstrated in a simulated plumbing workplace environment that complies with standard and authorised work practices, safety requirements and sustainability constraints.</p> <p>This includes access to:</p> <ul style="list-style-type: none"> • personal protective equipment • materials and equipment for electric welding • job tasks, specifications, manufacturer instructions and workplace procedures. <p>Assessor requirements</p> <p>Assessors must hold a trade certificate in plumbing and/or registration as a plumber.</p>

Section C – Units of competency

Unit code	VU23986		
Unit title	Use basic plumbing hand tools		
Application	<p>This unit specifies the performance outcomes, skills and knowledge required to use basic hand tools for a range of simple plumbing tasks.</p> <p>This unit applies to plumbing pre-apprentices who under close supervision and guidance, develop a defined and limited range of skills and knowledge in preparing them for entering the working environment within the plumbing industry. They use little judgement and follow instructions specified by the supervisor. On entering the industry, it is intended that further training will be required for this specific skill to ensure trade level standard for a registered plumber.</p> <p>No occupational licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.</p>		
Pre-requisite Unit(s)	Nil		
Competency Field	N/A		
Unit Sector	N/A		
Element	Performance Criteria		
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the assessment requirements.		
1	Plan to use basic plumbing hand tools	1.1	Identify job tasks with the supervisor to determine plumbing hand tools to be used.
		1.2	Identify workplace safety requirements associated with using plumbing hand tools.
		1.3	Identify sustainability requirements associated with the use of plumbing hand tools.
		1.4	Identify quality assurance requirements associated with using plumbing hand tools.

2	Prepare to use basic plumbing hand tools	2.1	Prepare basic plumbing hand tools to meet the requirements of the job.
		2.2	Check for serviceability and safety of hand tools and report any faults to supervisor according to workplace procedures.
		2.3	Follow safety and workplace requirements associated with the selection and use of basic plumbing hand tools.
		2.4	Select and correctly fit personal protective equipment relevant to the specific tool being prepared for use.
3	Manage basic plumbing hand tools	3.1	Handle hand tools safely according to their intended use and manufacturer specifications.
		3.2	Use hand tools appropriately in sequence with the task and job specification.
		3.3	Safely store tools when not in immediate use.
4	Clean up the work area	4.1	Clean the work area according to workplace procedures.
		4.2	Clean, check for serviceability and store tools according to workplace procedures.
		4.3	Dispose, recycle or store materials and waste according to workplace procedures.

Range of conditions

N/A

Foundation Skills

Foundation Skills describe the language, literacy, numeracy and employability skills that are essential to performance.

Foundation skills essential to performance in this unit, but not explicit in the performance criteria are listed below.

Skill	Description
Reading skills to:	Interpret information in workplace procedures and manufacturer's instructions.
Writing skills to:	Take down simple notes during tasks.
Oral communication skills to:	Use questioning and listening to obtain information. Use correct terminology when using plumbing hand tools.

Unit mapping

Code and title Current version	Code and Title Previous version	Comments
VU23986 Use basic plumbing hand tools	VU23054 Use basic plumbing hand tools	Equivalent

Assessment Requirements Template

Title	Assessment Requirements for VU23986 Use basic plumbing hand tools
Performance Evidence	<p>The learner must demonstrate the ability to complete tasks outlined in the elements, performance criteria and foundation skills of this unit including evidence of the ability to:</p> <ul style="list-style-type: none"> • safely prepare, handle, use and store at least eight different hand tools appropriate for simple plumbing tasks.
Knowledge Evidence	<p>The learner must be able to apply essential knowledge required to effectively do the tasks outlined in elements, performance criteria and foundation skills of this unit, including knowledge of:</p> <ul style="list-style-type: none"> • purpose and function of plumbing hand tools • terminology when using basic plumbing hand tools • techniques used for basic plumbing hand tools • workplace safety requirements and legislation, including personal protective equipment used when using basic plumbing hand tools • Australian standards, plumbing/building codes, legislation and regulations relevant to using basic plumbing hand tools • quality assurance requirements and procedures related to using basic plumbing hand tools • sustainability principles and requirements related to using basic plumbing hand tools.
Assessment Conditions	<p>Skills in this unit must be demonstrated in a simulated plumbing workplace environment that complies with standard and authorised work practices, safety requirements and sustainability constraints.</p> <p>This includes access to:</p> <ul style="list-style-type: none"> • personal protective equipment • basic plumbing hand tools • materials and equipment for using handheld tools • job tasks, specifications, manufacturer instructions and workplace procedures. <p>Assessor requirements</p> <p>Assessors must hold a trade certificate in plumbing and/or registration as a plumber.</p>

Section C – Units of competency

Unit code	VU23987		
Unit title	Use basic power tools		
Application	<p>This unit specifies the performance outcomes, skills and knowledge required to identify, select, use and store basic power tools associated with simple plumbing tasks. This unit does not include disc grinders over 100mm.</p> <p>This unit applies to plumbing pre-apprentices who under close supervision and guidance, develop a defined and limited range of skills and knowledge in preparing them for entering the working environment within the plumbing industry. They use little judgement and follow instructions specified by the supervisor. On entering the industry, it is intended that further training will be required for this specific skill to ensure trade level standard for a registered plumber.</p> <p>No occupational licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.</p>		
Pre-requisite Unit(s)	Nil		
Competency Field	N/A		
Unit Sector	N/A		
Element	Performance Criteria		
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the assessment requirements.		
1	Plan to use basic power tools for plumbing	1.1	Identify job tasks the supervisor to determine power tools to be used and their associated power sources and outlets and cables.
		1.2	Identify workplace safety requirements associated with using power tools.
		1.3	Identify sustainability requirements associated with the use of plumbing power tools.
		1.4	Identify quality assurance requirements associated with using power tools.

		1.5	Access and complete required documentation for power tools use according to workplace procedures.
2	Prepare to use basic power tools	2.1	Prepare basic power tools to meet the requirements of the job.
		2.2	Check for serviceability and safety of power tools and report any faults to supervisor according to workplace procedures.
		2.3	Follow safety and workplace requirements associated with the selection and use of basic plumbing power tools.
		2.4	Select and correctly fit personal protective equipment relevant to the specific tool being prepared for use.
3	Manage basic power tools	3.1	Handle power tools safely according to their intended use and manufacturer specifications.
		3.2	Use power tools appropriately in sequence with the task and job specification.
		3.3	Safely store tools when not in immediate use.
4	Clean up the work area	4.1	Clean the work area according to workplace procedures.
		4.2	Clean, check for serviceability and store tools according to workplace procedures.
		4.3	Dispose, recycle or store materials and waste according to workplace procedures.

Range of conditions

N/A

Foundation Skills

Foundation Skills describe the language, literacy, numeracy and employability skills that are essential to performance.

Foundation skills essential to performance in this unit, but not explicit in the performance criteria are listed below.

Skill	Description
Reading skills to:	Interpret information in workplace procedures and manufacturer's instructions.
Writing skills to:	Use clear language to document sign-out/sign in, fault reports and risk assessment.
Oral communication skills to:	Use questioning and listening to obtain information. Use correct terminology when using plumbing power tools.

Unit mapping

Code and title Current version	Code and Title Previous version	Comments
VU23987 Use basic power tools	VU23055 Use basic power tools	Equivalent

Assessment Requirements Template

Title	Assessment Requirements for VU23987 Use basic power tools
Performance Evidence	<p>The learner must demonstrate the ability to complete tasks outlined in the elements, performance criteria and foundation skills of this unit including evidence of the ability to:</p> <ul style="list-style-type: none"> • safely prepare, handle, use and store at least four different power tools appropriate for simple plumbing tasks.
Knowledge Evidence	<p>The learner must be able to apply essential knowledge required to effectively do the tasks outlined in elements, performance criteria and foundation skills of this unit, including knowledge of:</p> <ul style="list-style-type: none"> • purpose and function of plumbing power tools • power sources and types used for plumbing power tools • workplace documentation used for using plumbing power tools • terminology when using basic plumbing power tools • techniques used for basic plumbing power tools • workplace safety requirements and legislation, including personal protective equipment used when using basic plumbing power tools • Australian standards, plumbing/building codes, legislation and regulations relevant to using basic plumbing power tools • quality assurance requirements and procedures related to using basic plumbing power tools • sustainability principles and requirements related to using basic plumbing power tools.
Assessment Conditions	<p>Skills in this unit must be demonstrated in a simulated plumbing workplace environment that complies with standard and authorised work practices, safety requirements and sustainability constraints.</p> <p>This includes access to:</p> <ul style="list-style-type: none"> • personal protective equipment • basic power tools • materials and equipment for using plumbing power tools • job tasks, specifications, manufacturer instructions and workplace procedures. <p>Assessor requirements</p>

Assessors must hold a trade certificate in plumbing and/or registration as a plumber.

Section C – Units of competency

Unit code	VU23988									
Unit title	Use plumbing pipes, fittings and fixtures for basic plumbing installations									
Application	<p>This unit specifies the performance outcomes, skills and knowledge required to use plumbing pipes, plumbing fittings and plumbing fixtures and fastenings for basic plumbing installations.</p> <p>This unit applies to plumbing pre-apprentices who under close supervision and guidance, develop a defined and limited range of skills and knowledge in preparing them for entering the working environment within the plumbing industry. They use little judgement and follow instructions specified by the supervisor. On entering the industry, it is intended that further training will be required for this specific skill to ensure trade level standard for a registered plumber.</p> <p>No occupational licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.</p>									
Pre-requisite Unit(s)	Nil									
Competency Field	N/A									
Unit Sector	N/A									
Element	Performance Criteria									
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the assessment requirements.									
1	<table border="1"> <tr> <td>Prepare for basic plumbing installations</td> <td>1.1</td> <td>Clarify plans and specifications for basic plumbing installation with the supervisor.</td> </tr> <tr> <td></td> <td>1.2</td> <td>Identify workplace safety requirements associated with plumbing installation work.</td> </tr> <tr> <td></td> <td>1.3</td> <td>Identify sustainability requirements associated with the compliance requirements of Environment Protection Authority (EPA) legislation, specifically related to plumbing installations of pipes, fittings, and fixtures.</td> </tr> </table>	Prepare for basic plumbing installations	1.1	Clarify plans and specifications for basic plumbing installation with the supervisor.		1.2	Identify workplace safety requirements associated with plumbing installation work.		1.3	Identify sustainability requirements associated with the compliance requirements of Environment Protection Authority (EPA) legislation, specifically related to plumbing installations of pipes, fittings, and fixtures.
Prepare for basic plumbing installations	1.1	Clarify plans and specifications for basic plumbing installation with the supervisor.								
	1.2	Identify workplace safety requirements associated with plumbing installation work.								
	1.3	Identify sustainability requirements associated with the compliance requirements of Environment Protection Authority (EPA) legislation, specifically related to plumbing installations of pipes, fittings, and fixtures.								

		1.4	Identify quality assurance requirements according to workplace procedures.
		1.5	Identify and select pipes, fittings and fixtures for the task.
		1.6	Select and fit appropriate personal protective equipment for the task.
		1.7	Check tools and equipment for serviceability and report faults to the supervisor.
2	Install pipes, fittings and fixtures	2.1	Use pipes, fittings and fixtures according to manufacturer specifications and job task requirements.
		2.2	Fix and secure pipes, fittings and fixtures according to regulations, manufacturer specifications and job task requirements.
		2.3	Apply pipes, fittings and fixtures in an appropriate sequence to the job task and according to manufacturer specifications.
3	Secure fasteners and fixings	3.1	Prepare materials and fixture to be fastened and assess tolerance.
		3.2	Assess substrate and/or materials to be fastened or fixed to, for compatibility to the task.
		3.3	Assess material or fixture for its compatibility with proposed fasteners and fixings to be used.
		3.4	Install fasteners and fixings according to the manufacturer specifications.
4	Clean up the work area	4.1	Clean the work area according to workplace procedures.
		4.2	Clean, check for serviceability and store tools and equipment according to workplace procedures.
		4.3	Dispose, recycle or store materials and waste according to workplace procedures.

Range of conditions

N/A

Foundation Skills

Foundation Skills describe the language, literacy, numeracy and employability skills that are essential to performance.

Foundation skills essential to performance in this unit, but not explicit in the performance criteria are listed below.

Skill	Description
Reading skills to:	Interpret information in documents, drawings, specifications and workplace procedures.
Writing skills to:	Take down simple notes during tasks.
Oral communication skills to:	Use questioning and listening to obtain information. Use correct terminology when discussing basic plumbing installations, and when requesting component parts.
Numeracy skills to:	Interpret numerical information in plans and specifications. Take and use measurements to calculate quantities.

Unit mapping

Code and title Current version	Code and Title Previous version	Comments
VU23988 Use plumbing pipes, fittings and fixtures for basic plumbing installations	VU23056 Use plumbing pipes, fittings and fixtures to simulate plumbing installations	Equivalent Minor title change.

Assessment Requirements Template

Title	Assessment Requirements for VU23988 Use plumbing pipes, fittings and fixtures for basic plumbing installations
Performance Evidence	<p>The learner must demonstrate the ability to complete tasks outlined in the elements, performance criteria and foundation skills of this unit including evidence of the ability to:</p> <ul style="list-style-type: none"> • assemble, fabricate and install plumbing pipes, plumbing fittings and plumbing fixtures for a basic plumbing installation.
Knowledge Evidence	<p>The learner must be able to apply essential knowledge required to effectively do the tasks outlined in elements, performance criteria and foundation skills of this unit, including knowledge of:</p> <ul style="list-style-type: none"> • purpose, characteristics and application of plumbing pipes, plumbing fittings and plumbing fixtures • terminology used for plumbing installations of pipes, fittings and fixtures • types of specifications and drawings used for plumbing installations of pipes, fittings and fixtures • workplace safety requirements and legislation, including personal protective equipment used for plumbing installations of pipes, fittings and fixtures • tools and equipment and techniques used for plumbing installations of pipes, fittings and fixtures • Australian standards, plumbing/building codes, legislation and regulations relevant to plumbing installations of pipes, fittings and fixtures • quality assurance requirements and procedures related to plumbing installations of pipes, fittings and fixtures • sustainability principles and requirements related to plumbing installations of pipes, fittings and fixtures, including Environment Protection Authority (EPA) legislation.
Assessment Conditions	<p>Skills in this unit must be demonstrated in a simulated plumbing workplace environment that complies with standard and authorised work practices, safety requirements and sustainability constraints.</p> <p>This includes access to:</p> <ul style="list-style-type: none"> • personal protective equipment • tools and equipment for installing pipes, fittings and fixtures • a range of pipes, fittings and fixtures • a range of fasteners and fixings

- job tasks, specifications, manufacturer instructions and workplace procedures.

Assessor requirements

Assessors must hold a trade certificate in plumbing and/or registration as a plumber.