

22627VIC Advanced Diploma of Building Design (Architectural)

Version 1

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

**Accredited for the period: 01 January 2024 to 31
December 2028**

Version History:		Date
Version 1	Initial accreditation	August 2023

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Section A – Copyright and course classification information

<p>1. Copyright owner of the course</p>	<p>Copyright of this material is reserved to the Crown in the right of the State of Victoria on behalf of the Department of Jobs, Skills, Industries and Regions (DJSIR) Victoria.</p> <p>© State of Victoria 2023</p>
<p>2. Address</p>	<p>Deputy CEO Victorian Skills Authority Department of Jobs, Skills, Industries and Regions (DJSIR) GPO Box 4509 MELBOURNE VIC 3001</p> <p>Organisational contact Manager, Training and Learning Products Unit Engagement Branch Victorian Skills Authority Department of Jobs, Skills, Industries and Regions (DJSIR) Email: course.enquiry@djsir.vic.gov.au</p> <p>Day-to-day contact: Curriculum Maintenance Manager (CMM), Building Industries Holmesglen Institute PO Box 42 Holmesglen, VIC 3148 Telephone: (03) 9564 1987 Email: teresa.signorello@holmesglen.edu.au</p>
<p>3. Type of submission</p>	<p>This submission is for the re-accreditation of 22477VIC Advanced Diploma of Building Design (Architectural).</p>
<p>4. Copyright acknowledgement</p>	<p>The following units of competency:</p> <ul style="list-style-type: none"> • BSBESB401 Research and develop business plans • BSBPMG426 Apply project risk management techniques <p>have been imported from the BSB Business Services Training Package administered by the Commonwealth of Australia.</p> <p>The following unit of competency:</p> <ul style="list-style-type: none"> • CPCWHS1001 Prepare to work safely in the construction industry <p>has been imported from the CPC Construction, Plumbing and Services Training Package administered by the Commonwealth of Australia.</p> <p>© Commonwealth of Australia</p>
<p>5. Licensing and franchise</p>	<p>Copyright of this material is reserved to the Crown in the right of the State of Victoria. © State of Victoria (Department of Jobs, Skills,</p>



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6. Course accrediting body	Victorian Registration and Qualifications Authority
7. AVETMISS information	<p>ANZSCO code – 232000 Architects, Designers, Planners and Surveyors</p> <p>ASCED Code – 0401 Architecture and Urban Environment</p> <p>National course code - To be provided by the VRQA when the course is accredited.</p>
8. Period of accreditation	1 January 2024 – 31 December 2028



Section B – Course information

1. Nomenclature	Standard 4.1 and 5.8 AQTF 2021 Standards for Accredited Courses
1.1 Name of the qualification	Advanced Diploma of Building Design (Architectural)
1.2 Nominal duration of the course	2086 hours
2. Vocational or educational outcomes	Standard 5.1 AQTF 2021 Standards for Accredited Courses
2.1 Outcome(s) of the course	<p>The Advanced Diploma of Building Design (Architectural) is designed to provide graduates with the skills and knowledge to design and develop architectural working drawings for the construction of residential, commercial, and industrial buildings according to Victorian building legislation and codes, and Victorian Building Authority requirements including:</p> <ul style="list-style-type: none"> • interpreting client needs through sketch and design • utilising technology to develop plans and documentation for construction methods and specifications • liaising with building surveyors and builders • negotiating with local council • understanding probable cost comparisons • processing contract administration. <p>Graduates of the Advanced Diploma of Building Design (Architectural) are likely to be employed as building designers, architectural assistants, building design assistants or architectural draftspersons. They may work in small and large building design, architectural and construction businesses, and apply their skill to residential and non-residential developments.</p>
2.2 Course description	<p>The Advanced Diploma of Building Design (Architectural) is designed to provide graduates with the skills and knowledge to design and develop architectural working drawings for the construction of residential, commercial, and industrial buildings according to Victorian building legislation and codes, and Victorian Building Authority (VBA) requirements.</p> <p>This is currently the only course prescribed in the Victorian Building Regulations for registration in the class of Building Design (Architectural).</p>
3. Development of the course	Standards 4.1, 5.1, 5.2, 5.3 and 5.4 AQTF 2021 Standards for Accredited Courses
3.1 Industry, education, legislative, enterprise or community needs	Based on the monitoring and evaluation outcomes conducted by the CMM, Building Industries, the Victorian Department of Jobs, Skills, Industry and Regions, as copyright holder for this Victorian Crown Copyright accredited course, has determined that there is a continuing



need for the Advanced Diploma of Building Design (Architectural).

Building safety underpins the National Construction Code (NCC) and is of paramount importance to the community. Building designers have a seminal role in establishing building safety at the initial stage of the building supply chain.

As these professions represent the beginning of the supply chain for construction activity, qualified and experienced personnel are required to adequately resource the workforce to avoid project delays and meet industry demand.

On a macro level, the Australian construction industry is expected to register a real average annual growth, of 3.4% between 2022 and 2025, supported by construction works, including draftspersons related to public infrastructure projects.¹

Building designers are required to adequately resource the workforce to avoid project delays and meet industry demand. Due to the supply of domestic graduates not fulfilling current industry demand, the occupation of architectural draftsperson was added to the Skilled Occupation List 2017-2018 by the Department of Immigration as part of their migrant visa programs and continues to be in the 2022-2023 Skilled Occupation List.²

Employment growth in Construction is projected to be moderate in percentage terms, with an increase of 66,400 (or 5.8 per cent) over the five years to November 2026.

The lower-than-average projected employment growth in the industry (again in percentage terms) is likely to be reflected at the occupational level, with employment growth projected to be stronger than the all-occupations average in just four of the 10 largest occupations within the industry. Employment is projected to grow strongly for Electricians (up by 14,600 or 10.2 per cent), Construction Managers (up by 11,400 or 10.2 per cent) and Architectural, Building and Surveying Technicians (up by 8,800 or 11.9 per cent).³

This combined activity within the building and construction sector continues to support demand for building design graduates.

The Advanced Diploma of Building Design (Architectural) course is currently the only course prescribed in the Victorian Building Regulations for registration in the class of Building Design (Architectural).

The Building Regulations 2018 states in schedule 9, Part 3, clause 17 on page 390(STATUTORY RULE NUMBER 38/2018) the prescribed

¹ <https://www.businesswire.com/news/home/20220119005582/en/Australia-Construction-State-and-Territory-Market-Trends-and-Opportunities-Report-2021-2025---ResearchAndMarkets.com>

² Employment Outlook, Industry and occupation trends over the five years to November 2026 page 15

³ Employment Outlook, Industry and occupation trends over the five years to November 2026 page 15



course to meet the registration requirements is the successful completion of an Advanced Diploma in Building Design (22268VIC) from an RTO; and at least 2 years of practical experience. ⁴.

The Victorian Building Authority (VBA) does not recognise the endorsed national qualification as part of the registration process for a Draftsperson in the class of Building Design (Architectural). The national qualifications do not align with the Victorian regulatory framework or fully cover Victorian building legislation and codes.

There are 12 Victorian RTOs delivering the Advanced Diploma of Building Design (Architectural).

Following is the enrolment data of the accredited 22477VIC course:

Victorian Enrolments	2019	2020	2021	2022	2023*
Govt sub	1052	1301	1376	1251	1000
FFS	229	251	198	89	67
Total	1281	1552	1574	1340	1067

* Denotes half year enrolments

Government subsidised enrolments make up the bulk of total enrolments, averaging approximately 88% (and rising) over four and a half years. Overall, course enrolments have dropped, and the uptake trend is declining.

Target groups for those undertaking the course include:

- qualified tradespeople from related trades in the building and construction industry
- existing workers in building design who wish to upgrade their current qualifications or apply for registration to become a registered building practitioner
- students who have completed their Victorian Certificate of Education.

The project for the redevelopment of the 22627VIC Advanced Diploma of Building Design (Architectural) was overseen by a project steering committee comprising of the following industry and RTO representatives:

Belinda Stewart

Principal, 3875 Design & Drafting

⁴ <https://www.legislation.vic.gov.au/as-made/statutory-rules/building-regulations-2018>



	<p>Bill Balakis Managing Director, BB Design Group</p> <p>Catherine Ciavarella Program Coordinator Building Design (Architectural), RMIT University</p> <p>Geoff Hoare Managing Director, Graaph Design</p> <p>Jennifer Mason Senior Policy Advisor, Education & Training, Victorian Building Authority</p> <p>Narelle Lockwood Building Assessor, Victorian Building Authority</p> <p>Peta Anderson Chief Executive Officer, Design Matters National</p> <p>In attendance:</p> <p>Teresa Signorello Executive Officer, CMM, Building Industries.</p> <p>As well as face-to-face and email consultations, the members of the steering committee met formally on three occasions to review and confirm the required skills and knowledge outcomes of the course, course structure and final accreditation submission.</p> <p>Members of the teachers' network, the Victorian Advanced Building Studies Network (VABSN), were also consulted, and participated in the refinement of the technical content and assessment requirements of the revised 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>A mid cycle review of the accredited course was undertaken in October 2022 to determine the relevance and currency of its outcomes to industry since its reaccreditation in January 2019. Data considered for analysis included course enrolments and survey responses from key user groups.</p> <p>Overall, the feedback from these consultations were favourable; the course outcomes and delivery are appropriate to the needs of learners</p>



entering the industry.

Changes made to the updated course structure/course during consultation and validation processes include:

- splitting the content of the units VU22465 Provide design solutions for residential and commercial buildings and VU22466 Integrate digital applications into architectural workflows into four units for better implementation, resulting in an increase in total number of core units to be completed from 20 to 22 units
- the updating of current national and Victorian regulatory frameworks and industry practices in all relevant units of competency
- the updating of all enterprise units to reflect the revised Standards for Accredited courses unit template
- the inclusion of current versions of endorsed units of competency where they have been updated.

Transition arrangements

The course 22627VIC Advanced Diploma of Building Design (Architectural) supersedes and is equivalent to 22477VIC Advanced Diploma of Building Design (Architectural).

The following table shows the unit mapping against 22627VIC and 22477VIC to indicate its relationship in equivalence status.

22477VIC Advanced Diploma of Building Design (Architectural)	22627VIC Advanced Diploma of Building Design (Architectural)	Relationship E- equivalent NE – not equivalent
BSBPMG415 Apply project risk management techniques	BSBPMG426 - Apply project risk management techniques	E - updated
BSBSMB404 Undertake small business planning	BSBESB401 - Research and develop business plans	E - updated
CPCCWHS1001 Prepare to work safely in the construction industry	CPCWHS1001 Prepare to work safely in the construction industry	E - updated
VU22454 Undertake site survey and analysis to inform design process	VU23441 Undertake site survey and analysis to inform design process	E Updated to meet revised Standards for Accredited Courses unit template.
VU22455 Apply structural and	VU23442 Apply structural and	E



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construction technology to the design of residential buildings	construction technology to the design of residential buildings	Updated to meet revised Standards for Accredited Courses unit template.
VU22456 Apply structural and construction technology to the design of commercial buildings	VU23443 Apply structural and construction technology to the design of commercial buildings	E Updated to meet revised Standards for Accredited Courses unit template.
VU22457 Comply with relevant legislation in the design of residential buildings	VU23444 Comply with relevant legislation in the design of residential buildings	E Updated to meet revised Standards for Accredited Courses unit template.
VU22458 Comply with relevant legislation in the design of commercial buildings	VU23445 Comply with relevant legislation in the design of commercial buildings	E Updated to meet revised Standards for Accredited Courses unit template.
VU22459 Design safe buildings	VU23446 Design safe buildings	E Updated to meet revised Standards for Accredited Courses unit template.
VU22460 Design sustainable buildings	VU23447 Design sustainable buildings	E Updated to meet revised Standards for Accredited Courses unit template.
VU22461 Integrate services layout into design documentation	VU23448 Integrate services layout into design documentation	E Updated to meet revised Standards for Accredited Courses unit template.
VU22462 Produce preliminary and working drawings for residential buildings	VU23449 Produce preliminary and working drawings for residential buildings	E Updated to meet revised Standards for Accredited Courses unit template.
VU22463 Produce preliminary and	VU23450 Produce preliminary and	E



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	working drawings for commercial buildings	working drawings for commercial buildings	Updated to meet revised Standards for Accredited Courses unit template.
	VU22464 Select construction materials for building projects	VU23451 Select construction materials for building projects	E Updated to meet revised Standards for Accredited Courses unit template.
	VU22465 Provide design solutions for residential and commercial buildings	VU23452 Provide design solutions for residential buildings	NE Title change Content split into two units Updated to meet revised Standards for Accredited Courses unit template.
	VU22465 Provide design solutions for residential and commercial buildings	VU23453 Provide design solutions for commercial buildings	NE Title change Content split into two units Updated to meet revised Standards for Accredited Courses unit template.
	VU22466 Integrate digital applications into architectural workflows	VU23454 Integrate digital applications into residential architectural workflows	NE Title change Content split into two units Updated to meet revised Standards for Accredited Courses unit template.
	VU22466 Integrate digital applications into architectural workflows	VU23455 Integrate digital applications into commercial architectural workflows	NE Title change Content split into two units Updated to meet revised Standards for Accredited Courses unit template.



VU22467 Present architectural designs	VU23456 Present architectural designs	E Updated to meet revised Standards for Accredited Courses unit template.
VU22468 Manage architectural project administration	VU23457 Manage architectural project administration	E Updated to meet revised Standards for Accredited Courses unit template.
VU22469 Undertake complex architectural projects	VU23458 Undertake complex architectural projects	E Updated to meet revised Standards for Accredited Courses unit template.
VU22470 Conduct, interpret and apply a Bushfire Attack Level (BAL) assessment	VU23459 Conduct, interpret and apply a Bushfire Attack Level (BAL) assessment	E Updated to meet revised Standards for Accredited Courses unit template.

4. Course outcomes	Standards 5.5, 5.6 and 5.7 AQTF 2021 Standards for Accredited Courses
4.1 Qualification level	<p>The outcomes of the Advanced Diploma of Building Design (Architectural) comply with the criteria of the AQF Advanced Diploma qualification type descriptor.</p> <p>Graduates of the Advanced Diploma of Building Design (Architectural) will have specialised and integrated technical and theoretical knowledge with depth within building design, including:</p> <ul style="list-style-type: none"> demonstrating an understanding of specialised structural and construction technology employing a range of applications required in architectural workflows applying the principles of sustainability and safety to building design, including the technical knowledge of selecting suitable construction materials. <p>Graduates of the Advanced Diploma of Building Design (Architectural) will have a wide range of cognitive and communication skills, and specialised technical, creative or conceptual skills to select and apply methods and technologies to:</p> <ul style="list-style-type: none"> identify, analyse, synthesise, and act on information from a range of sources, such as the national and Victorian regulatory framework, codes and Australian Standards



- transfer specialised skills and knowledge to others, including clients, colleagues, architects and local council employees
- formulate responses to complex problems to produce innovative and compliant design outcomes
- express ideas and perspectives to promote shared understandings of project design, process and timeline requirements.

Graduates of the Advanced Diploma of Building Design (Architectural) will demonstrate the application of skills and knowledge:

- with depth in areas of building legislation in changing residential, commercial and industrial sector contexts
- with initiative and judgement in planning, design, technical or management functions related to building design projects
- to adapt a range of fundamental construction principles and complex drafting techniques to established and new building design concepts
- across a broad range of technical or management functions with accountability for personal outputs and personal and team outcomes within broad parameters, such as communicating and clarifying complex structures and layouts to a range of key stakeholders to gain building permit approval.

Volume of learning

The volume of learning for this qualification is between 1.5 – 2 years which is consistent with the AQF Volume of Learning requirement for an Advanced Diploma. The course incorporates structured training delivery and assessment and unstructured learning activities undertaken by the learner. Unstructured learning activities may include:

- research
- assignments
- self-study to revise areas of knowledge and practice skills.

<p>4.2 Foundation skills</p>	<p>Foundation skills applicable to the outcomes of this course are identified in the performance criteria or within the Foundation Skills section of the units of competency where not explicit in the performance criteria.</p>
<p>4.3 Recognition given to the course (if applicable)</p>	<p>Not applicable.</p>
<p>4.4 Licensing/regulatory requirements (if applicable)</p>	<p>There are no licensing or regulatory requirements for the course. However, this is the prescribed course to become registered with the Victorian Building Authority (VBA) in the Victorian class of Building Design (Architectural) and one of the prescribed courses for the Victorian class of Building Design (Interior).</p> <p>See: https://www.vba.vic.gov.au/registration-and-licensing/building-practitioner-registration/draftsperson</p>



5. Course rules	Standards 5.8 and 5.9 AQTF 2021 Standards for Accredited Courses
5.1 Course structure	<p>To be awarded the 22627VIC Advanced Diploma of Building Design (Architectural) all 22 units of competency must be achieved.</p> <p>All units are core to provide a consistent outcome for graduates with skills that allow for registration with the VBA and broad employment opportunities.</p> <p>Where the full course is not completed, a VET Statement of Attainment will be issued for each unit successfully completed.</p>

Unit of competency code	Unit of competency title	Field of Education code (six-digit)	Nominal hours
BSBESB401	Research and develop business plans	080301	50
BSBPMG426	Apply project risk management techniques	080315	40
CPCWHS1001	Prepare to work safely in the construction industry	061301	6
VU23441	Undertake site survey and analysis to inform design process	040199	40
VU23442	Apply structural and construction technology to the design of residential buildings	040199	180
VU23443	Apply structural and construction technology to the design of commercial buildings	040199	120
VU23444	Comply with relevant legislation in the design of residential buildings	040199	50
VU23445	Comply with relevant legislation in the design of commercial buildings	040199	60
VU23446	Design safe buildings	040199	40
VU23447	Design sustainable buildings	040199	90
VU23448	Integrate services layout into design documentation	040199	40
VU23449	Produce preliminary and working drawings for residential buildings	040199	180



VU23450	Produce preliminary and working drawings for commercial buildings	040199	180
VU23451	Select construction materials for building projects	040199	60
VU23452	Provide design solutions for residential buildings	040199	100
VU23453	Provide design solutions for commercial buildings	040199	100
VU23454	Integrate digital applications into residential architectural workflows	040199	120
VU23455	Integrate digital applications into commercial architectural workflows	040199	120
VU23456	Present architectural designs	040199	120
VU23457	Manage architectural project administration	040199	60
VU23458	Undertake complex architectural projects	040199	280
VU23459	Conduct, interpret and apply a Bushfire Attack Level (BAL) assessment	040199	50
Total nominal hours			2086

Standard 5.11 AQTF 2021 Standards for Accredited Courses

5.2 Entry requirements

There are no entry requirements for the 22627VIC Advanced Diploma of Building Design (Architectural).

Applicants for the Advanced Diploma of Building Design (Architectural) are best equipped to successfully undertake the qualification if they have a demonstrated capacity in learning, reading, writing, oral communication and numeracy to level 4 of the ACSF.

The following is a general guide to the learning, reading, writing, oral communication and numeracy skills of learners aligned to the Australian Core Skills Framework (ACSF), details of which can be accessed [here](#).

Indicators of ACSF Level 4 could include:

- Accepts new learning challenges, explicitly designing, reflecting on and redesigning approaches to learning as an integral part of the process
- Interprets and critically analyses complex texts that includes legislation, regulations, codes and standards, product and material specifications



- Communicates complex relationships between ideas and information, matching style of writing to purpose and audience
- Demonstrates flexibility in spoken texts by choosing appropriate structures and strategies in a range of contexts
- Extracts and evaluates the mathematical information embedded in a range of tasks and texts to determine design solutions

Learners with language, literacy and numeracy skills at lower levels than those suggested will 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.

These standards ensure that the assessment strategies meet requirements of the course and therefore ensure that all assessments are valid, reliable and flexible and fair.

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

- observation of tasks in real or simulated work conditions, with questioning to confirm knowledge of building specifications and required documentation
- direct questioning
- research projects
- practical assessment in the development of a set of working drawings
- sketches and digitally generated images for the presentation of a design concept
- portfolio of documentation for an architectural project, including preliminary drawings and design images.

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

While there is no compulsory workplace assessment for the course, assessment for the unit VU23459 Conduct, interpret and apply a



	Bushfire Attack Level (BAL) assessment, is required to be conducted 'on-site'.
6.2 Assessor competencies	<p>Assessment must be undertaken by a person or persons in accordance with:</p> <ul style="list-style-type: none"> 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>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>All assessment of units imported from training packages must reflect the requirements for assessors specified in the relevant training packages.</p>
7. Delivery	Standards 5.12, 5.13 and 5.14 AQTF 2021 Standards for Accredited Courses
7.1 Delivery modes	<p>The Advanced Diploma of Building Design (Architectural) may be offered on a full or part-time basis and may involve a blended delivery mode, including:</p> <ul style="list-style-type: none"> workshops individual assignments team-based assignments applied learning in the workplace or simulated building design/drafting environment. <p>The objective of the course is to develop practical competencies within an industry context. Practical demonstrations in the form of realistic, holistic projects that provide participants with a sense of 'real-work' experience are considered most suitable to achieving this aim. Exercises and assignments are also deemed suitable.</p> <p>Delivery strategies should recognise the nature of the units and the learning styles of the participants. Some units may address common content; therefore integration may be appropriate.</p> <p>Learners may be supported through:</p> <ul style="list-style-type: none"> online (internet, social media, email and telephony) face-to-face conferencing, mentoring and interviews ad hoc arrangements, and regular progress monitoring, particularly for practical work. <p>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</p>



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 always respected.

7.2 Resources

Resources that are essential for the delivery of the 22627VIC Advanced Diploma of Building Design (Architectural) include:

- a building design/site workplace
- a training room/simulated workplace environment
- hardware devices, such as:
 - computers
 - scanners
 - digitisers
 - printers/plotters
 - digital projectors/display devices
 - external storage devices
 - workstation platform
- digital software, which could include:
 - BIM and integrated BIM software applications
 - design documentation software
 - graphic development and/or editing software
 - internet and network communication platforms
 - multimedia, animation and rendering software
- basic surveying and measuring equipment
- hand sketching materials
- materials for model building
- internet access
- relevant legislation and regulation.

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

Trainer competence

Training must be undertaken by a person or persons in accordance with:

- 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



	<ul style="list-style-type: none"> the relevant standards and Guidelines for RTOs at the time of assessment. <p>The units of competency imported from training packages or accredited courses must reflect the requirements for resources/trainers specified in that training package or accredited course.</p>
<p>8. Pathways and articulation</p>	<p>Standard 5.10 AQTF 2021 Standards for Accredited Courses</p> <p>Advanced Diploma of Building Design (Architectural) comprises of three nationally endorsed units of competency from the following training packages:</p> <ul style="list-style-type: none"> BSB Business Services CPC Construction, Plumbing and Services. <p>Completion of those units provide credit transfers into any qualifications or courses containing those units.</p> <p>There are no formal articulation arrangements in place at the time of accreditation.</p>
<p>9. Ongoing monitoring and evaluation</p>	<p>Standard 5.15 AQTF 2021 Standards for Accredited Courses</p> <p>The CMM for Building Industries is responsible for the ongoing monitoring and evaluation of the 22627VIC Advanced Diploma of Building Design (Architectural).</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 changes to the course.</p>



Section C – Units of competency

The following is a list of imported units of competency for this course, which can be downloaded from the National Register (training.gov.au):

- BSBESB401 Research and develop business plans
- BSBPMG426 Apply project risk management techniques
- CPCWHS1001 Prepare to work safely in the construction industry.

The following units of competency developed for the course, which comply with the [AQTF 2021 Standards for Accredited Courses - Unit of Competency Template](#) are detailed in this section:

- VU23441 Undertake site survey and analysis to inform design process
 - VU23442 Apply structural and construction technology to the design of residential buildings
 - VU23443 Apply structural and construction technology to the design of commercial buildings
 - VU23444 Comply with relevant legislation in the design of residential buildings
 - VU23445 Comply with relevant legislation in the design of commercial buildings
 - VU23446 Design safe buildings
 - VU23447 Design sustainable buildings
 - VU23448 Integrate services layout into design documentation
 - VU23449 Produce preliminary and working drawings for residential buildings
 - VU23450 Produce preliminary and working drawings for commercial buildings
 - VU23451 Select construction materials for building projects
 - VU23452 Provide design solutions for residential
 - VU23453 Provide design solutions commercial buildings
 - VU23454 Integrate digital applications into residential architectural workflows
 - VU23455 Integrate digital applications into commercial architectural workflows
 - VU23456 Present architectural designs
 - VU23457 Manage architectural project administration
 - VU23458 Undertake complex architectural projects
 - VU23459 Conduct, interpret and apply a Bushfire Attack Level (BAL) assessment.
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Unit code	VU23441
Unit title	Undertake site survey and analysis to inform design process
Application	<p>This unit describes the performance outcomes, skills and knowledge required to undertake a site survey and a site analysis for residential Class 1 or commercial Class 2-9 building projects.</p> <p>It includes the ability to use basic surveying equipment, record and interpret data and produce measured drawings and documentation that comply with relevant national and Victorian regulatory frameworks, local council guidelines and workplace procedures.</p> <p>This unit applies to building designers who undertake site surveys and site analysis for building projects within the context of relevant legislation and the legal responsibilities of building designers.</p> <p>No occupational licensing or legislative requirements apply to this unit at the time of publication. However, this unit forms part of a minimum qualification requirement for the registration class of Draftsperson, Building Design (Architectural) category, with the Victorian Building Authority.</p>
Pre-requisite Unit(s)	N/A
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	Prepare to carry out a measured survey	1.1	Determine project and relevant regulatory requirements and workplace procedures to carry out the survey.
		1.2	Collate required information, specifications and documentation to undertake survey.
		1.3	Identify and document on-site occupational health and safety (OHS)/work health and safety (WHS) hazards according to regulatory and workplace safety procedures.
		1.4	Identify and inspect required levelling equipment for damage, wear and serviceability according to manufacturer's guidelines.
2	Undertake a site analysis and record site and building information	2.1	Identify and record relationship of site to adjoining properties and surrounding environment to establish the context of the development.

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		2.2	Identify and record physical characteristics and local climate conditions of the site for consideration in the design of the building.
		2.3	Take digital images of relevant site and building elements to assist in the development of accurate scaled measured drawings.
		2.4	Produce field sketches which record site and building elements in plan, elevation and section where required.
		2.5	Verify accuracy of field sketch data.
3	Measure and record linear distances on-site	3.1	Measure distances using basic measuring and surveying equipment.
		3.2	Use field data to calculate and record overall distances.
4	Interpret and apply data from a site survey to determine horizontal and vertical angles	4.1	Collate site analysis data to determine site features, existing conditions and levels.
		4.2	Determine preliminary levels of both horizontal and vertical angles to inform initial design processes.
		4.3	Record results according to workplace procedures.
5	Plot contours and cut and fill	5.1	Use spot level values to interpolate contour lines and plot on site plan.
		5.2	Calculate cut and fill batters and plot on plan and section.
6	Produce measured drawings and documentation	6.1	Produce initial measured drawings to scale and develop site details of existing conditions from site survey data.
		6.2	Review and update measured drawings to confirm that all site and building elements are accurately depicted as required.
		6.3	Complete documentation to industry standards according to relevant regulatory requirements and accepted time frames.

Range of Conditions

N/A

Foundation Skills

Foundation Skills describe the language, literacy, numeracy and employability skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
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Reading skills to:	<ul style="list-style-type: none"> interpret key information from a range of documentation and specifications
Writing skills to:	<ul style="list-style-type: none"> accurately record information using clear language and industry terminology
Oral communication skills to:	<ul style="list-style-type: none"> use questioning to identify and confirm requirements

Unit Mapping Information

Code and Title Current Version	Code and Title Previous Version	Comments
VU23441 Undertake site survey and analysis to inform design process	VU22454 Undertake site survey and analysis to inform design process	Equivalent unit. Updated to meet revised Standards for Accredited Courses unit template.



Assessment Requirements Template

Title

Assessment Requirements for VU23441 Undertake site survey and analysis to inform design process

Performance Evidence

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:

- carry out a basic site survey and a detailed site analysis for a residential Class 1 building or commercial Class 2-9 building project compliant with OHS/WHS requirements.

In completing the above, there must also be evidence that the learner has:

- documented accurate site analysis of the site and surrounding environment that details:
 - physical characteristics of the site and adjoining properties
 - surrounding environment
 - climate conditions
- produced measured drawings and site details compliant with relevant national and Victorian regulatory frameworks, OHS/WHS requirements, local council guidelines and workplace procedures.

Knowledge Evidence

The learner must be able to apply essential knowledge required to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the work role. This includes knowledge of:

- national regulatory framework, including the National Construction Code (NCC) and Australian Standards, Victorian regulatory framework, local council guidelines relevant to conducting site surveys
- relevant specifications and documentation required to undertake site surveys, including planning schemes, titles, field/geo digital data and maps
- OHS/WHS risk analysis processes and documentation relevant to conducting a site survey
- site and building information for design consideration, including:
 - physical characteristics of the site and adjoining properties and surrounding environments
 - built form and character of existing buildings
 - title boundaries, easements and fences
 - site levels, contours and any geotechnical conditions
 - access and connection points
 - street frontage features, services and roads access
 - location and height of walls built to the site boundary
 - all trees and vegetation on the subject site
 - drainage and services
 - significant trees and vegetation of adjoining properties and in the public realm

	<ul style="list-style-type: none"> • surrounding environment: <ul style="list-style-type: none"> ○ views from the site ○ vegetation ○ noise sources ○ orientation ○ climate conditions • solar access <ul style="list-style-type: none"> ○ wind direction ○ topography ○ microclimates • types, specifications and capabilities of basic surveying equipment and application • Australian drawing standards related to the production of measured drawings • workplace procedures and processes for the administration and preparation of working drawings and specifications.
<p>Assessment Conditions</p>	<p>Skills in this unit must be demonstrated on a building site and building design workplace or environments that simulates workplace conditions.</p> <p>This includes access to:</p> <ul style="list-style-type: none"> • national regulatory framework, including the NCC and Australian Standards • Victorian regulatory framework • local council guidelines • workplace procedures relevant to the conducting site surveys • relevant specifications and documentation, including land title, site plan, planning scheme and working drawings • measuring and levelling equipment, including manufacturer’s guidelines. <p>Assessor requirements</p> <p>No specialist vocational competency requirements for assessors apply to this unit.</p>

Unit code	VU23442
Unit title	Apply structural and construction technology to the design of residential buildings
Application	<p>This unit describes the performance outcomes, skills and knowledge required to apply structural and construction technology to the design of residential buildings.</p> <p>It includes the ability to identify and apply the Victorian regulatory framework and the provisions for National Construction Code (NCC) Classes 1 and 10 and relevant Australian Standards as they apply to the structural and construction components of a residential building.</p> <p>This unit applies to building designers who are required to apply structural and construction technology to the design of residential buildings within the legal responsibilities of building designers for construction methods.</p> <p>No occupational licensing or legislative requirements apply to this unit at the time of publication. However, this unit forms part of a minimum qualification requirement for the registration class of Draftsperson, Building Design (Architectural) category, with the Victorian Building Authority.</p>
Pre-requisite Unit(s)	N/A
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	Determine legislative requirements for design of residential buildings	1.1	Interpret relevant regulatory requirements impacting on design and construction for residential buildings of classes 1 and 10.
		1.2	Interpret relevant sections of the NCC and Australian Standards that apply to the structural and construction principles of residential buildings.
		1.3	Review property information certificate regarding flood-prone risk, termite-prone risk and Alpine area classification.
2	Investigate site	2.1	Identify site features and available services to plan site preparation and inform the design intent.
		2.2	Determine possible site impacts on structural elements by assessing site conditions and the proposed design and construction.

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		2.3	Analyse geotechnical soil report to identify soil classification and footing system recommendation.
		2.4	Identify the footing and slab construction design as specified by the structural engineer and incorporate in all supporting documents.
		2.5	Document specifications for footing and slab construction design in supporting documentation.
3	Analyse and apply construction techniques and methodologies	3.1	Analyse structural systems and apply construction methodologies to solve construction system and design issues.
		3.2	Integrate structural principles into the building fabric to accommodate materials and finishes according to relevant standards and design intent.
		3.3	Identify alternative construction approaches to accommodate special conditions.
		3.4	Analyse the construction sequence, buildability, and order of associated trades to ensure efficient building processes.
		3.5	Develop, sketch and document compliant design solutions using deemed to satisfy (DTS).
4	Specify structural requirements	4.1	Design, draw and detail timber wall, floor and roof framing systems according to timber framing code and in consultation with engineer, as required.
		4.2	Design, draw and detail bracing and tie-down system to meet structural requirements.
		4.3	Identify, draw and detail steel framing systems according to construction practices in consultation with engineer.
		4.4	Document all framing requirements ensuring all fixings and specified materials are detailed.
5	Specify masonry requirements	5.1	Identify, draw and detail unreinforced and reinforced masonry systems for internal and external walls according to relevant regulatory framework requirements.
		5.2	Design and draw weatherproofing details to meet relevant Australian Standards.
6	Specify requirements for safety, health and amenity	6.1	Research and incorporate statutory requirements for fire separation and means of escape into design.
		6.2	Design and draw wet area details that incorporate materials and sealing of wall and flooring junctions.
		6.3	Design and document facilities and room heights according to relevant regulatory framework requirements.

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		6.4	Calculate compliant and design optimum natural light and ventilation.
		6.5	Select mechanical air handling systems based on efficiency and performance for heating, cooling and ventilation
		6.6	Design, draw and detail acoustic separation for walls, floors and ceilings, that incorporates selecting sound insulation to reduce sound transmission and determination of compliant Rw(weighted sound reduction index) levels
		6.7	Design provisions for safe movement and access according to relevant framework requirements and Liveable Housing Design Standard.
		6.8	Design, draw and notate stair construction details providing safe movement and access as per NCC requirements and relevant Australian Standards.
		6.9	Provide compliant building insulation levels, glazing requirements and ventilation to determine energy usage.
		6.10	Identify and detail pool safety barrier requirements as per NCC and relevant Australian standards.
7	Specify requirements for finishes and services	7.1	Design, draw and notate for claddings, linings, finishes and coatings according to relevant regulatory framework requirements and manufacturer's guidelines.
		7.2	Design, draw and document details of materials and finishes for joinery fabrication and installations.
		7.3	Specify provisions for the installation and connection of services according to relevant regulatory framework requirements.

Range of Conditions

N/A

Foundation Skills

Foundation Skills describe the language, literacy, numeracy and employability skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Reading skills to:	<ul style="list-style-type: none"> interpret key information from legislation, regulations, codes and standards and product and material specifications
Writing skills to:	<ul style="list-style-type: none"> prepare detailed documentation using logical structure, clear language and industry terminology



Oral communication skills to:	<ul style="list-style-type: none"> • using questioning to identify and confirm requirements • use clear language and concepts appropriate to industry conventions when exchanging information
Numeracy skills to:	<ul style="list-style-type: none"> • apply measurements and calculations to construction systems

Unit Mapping Information

Code and Title Current Version	Code and Title Previous Version	Comments
VU23442 Apply structural and construction technology to the design of residential buildings	VU22455 Apply structural and construction technology to the design of residential buildings	Equivalent unit. Updated to meet revised Standards for Accredited Courses unit template.



Assessment Requirements Template

Title

Assessment Requirements for VU23442 Apply structural and construction technology to the design of residential buildings

Performance Evidence

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:

- apply the principles of structural and construction to the design of at least two residential buildings in the drawn form with supporting evidence that includes:
 - a new dwelling
 - an addition or alteration to an existing dwelling
 - one of the above dwellings must be of two storey.

In completing the above there must also be evidence that the learner has, for each building design:

- complied with relevant national and Victorian regulatory frameworks and local council guidelines
- developed supporting evidence that includes the following key property information:
 - site's feature
 - site risks: flood, termite, alpine classification
- developed specifications for structural components of the building and the requirements for safe and healthy use of the building that includes:
 - footings systems
 - timber framing/steel framing
 - masonry
 - concrete
 - fire rating
 - health and amenity
 - cladding
 - joinery
 - services.

Knowledge Evidence

The learner must be able to apply essential knowledge required to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the work role. This includes knowledge of:

- national regulatory framework, including the National Construction Code (NCC) and Australian standards, Victorian regulatory framework, local council guidelines relevant to the design, planning and construction of residential buildings
- legislative requirements for residential buildings in relation to the design approval process
- construction methods, standards and services in compliance with relevant legislation and design specifications

	<ul style="list-style-type: none"> • application of the structural principles of construction of residential buildings, types and behaviour of loads • characteristics, performance and application of construction materials, including framing, masonry, finishes and services • working drawings and specifications for the design of residential buildings • elements of site preparation, including existing site conditions and design and construction elements • integration of services in a residential building design • statutory requirements for fire separation • specifications for a residential building providing optimum safety, health and amenity for users.
Assessment Conditions	<p>Skills in this unit must be demonstrated in a building design workplace or an environment that simulates workplace conditions.</p> <p>This includes access to:</p> <ul style="list-style-type: none"> • national regulatory framework, including the NCC and Australian Standards • Victorian regulatory framework • local council guidelines • relevant specifications and documentation • research resources, including industry-related information. <p>Assessor requirements</p> <p>No specialist vocational competency requirements for assessors apply to this unit.</p>

Unit code	VU23443
Unit title	Apply structural and construction technology to the design of commercial buildings
Application	<p>This unit describes the performance outcomes, skills and knowledge required to apply structural and construction technology to the design of commercial buildings.</p> <p>It includes the ability to identify and apply Victorian regulatory framework and the provisions for National Construction Code (NCC) Classes 2 to 9 (Types A, B and C) and relevant Australian Standards as they apply to the structural and construction components of a commercial building.</p> <p>This unit applies to building designers who are required to apply structural and construction technology to the design of commercial buildings within the legal responsibilities of building designers for construction methods.</p> <p>No occupational licensing or legislative requirements apply to this unit at the time of publication. However, this unit forms part of a minimum qualification requirement for the registration class of Draftsperson, Building Design (Architectural) category, with the Victorian Building Authority.</p>
Pre-requisite Unit(s)	N/A
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	Determine legislative requirements for the design of commercial buildings	1.1	Interpret relevant regulatory requirements impacting on design and construction for a commercial building of classes 2-9, Types A, B and C.
		1.2	Interpret relevant sections of the NCC and Australian Standards that apply to the structural and construction principles of commercial buildings.
		1.3	Review local government planning regulations for the design and construction of a commercial building.
2	Investigate site	2.1	Identify site features and available services to plan site preparation to inform the design intent and for preparation of documentation.



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		2.2	Interpret soil engineer's report to determine specifications for footing systems appropriate for foundation design.
		2.3	Identify and control environmental issues impacting on the site according to regulatory requirements.
3	Analyse and apply construction techniques and methodologies	3.1	Analyse structural systems and apply construction methodologies to solve construction system and design issues.
		3.2	Integrate structural principles into the building fabric to accommodate materials and finishes according to relevant standards and design intent.
		3.3	Identify alternative approaches to the construction of commercial buildings to accommodate special conditions.
		3.4	Develop, sketch and document compliant construction design solutions.
4	Specify structural requirements	4.1	Design, draw and detail timber wall, floor and roof framing systems according to timber framing code and in consultation with structural engineer, if required.
		4.2	Design, draw and detail bracing and tie-down system to meet structural requirements.
		4.3	Identify, draw and detail steel framing systems according to construction practices and in consultation with engineer.
		4.4	Identify, draw and detail unreinforced and reinforced masonry systems for the construction of internal and external walls according to relevant legislation.
		4.5	Detail weatherproofing to meet relevant Australian Standards.
		4.6	Document all structural requirements that incorporates fixings and materials.
		4.7	Design, draw and detail waterproofing requirements for basement construction and balcony construction.
5	Comply with fire resistance requirements	5.1	Design building to maintain structural stability and provide safeguards in the event of fire.
		5.2	Confirm specifications for building design to comply with statutory requirements for fire separation and relevant legislation.
6	Specify requirements for safety, health and amenity	6.1	Design and draw wet area details that incorporate materials and sealing of wall and flooring junctions.
		6.2	Design, draw and document facilities and room heights according to relevant regulatory framework requirements.

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		6.3	Select sound insulation materials according to relevant regulatory framework requirements.
		6.4	Design provisions for safe movement and access according to relevant regulatory framework requirements and Liveable Housing Design Standard where applicable.
		6.5	Design, draw and detail acoustic separation for walls, floors and ceilings, that incorporates selecting sound insulation to reduce sound transmission and determination of compliant Rw (Weighted Sound Reduction Index) levels
7	Specify requirements for construction	7.1	Design, draw and notate details for claddings, linings, finishes and coatings according to relevant regulatory framework requirements.
		7.2	Design, draw and document details of materials and finishes for joinery fabrication and installations.
		7.3	Specify provisions for the installation and connection of services according to relevant regulatory framework requirements.

Range of Conditions

N/A

Foundation Skills

Foundation Skills describe the language, literacy, numeracy and employability skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Reading skills to:	<ul style="list-style-type: none"> interpret key information from legislation, regulations, codes and standards and product and material specifications
Writing skills to:	<ul style="list-style-type: none"> prepare detailed documentation using logical structure, clear language and industry terminology
Oral communication skills to:	<ul style="list-style-type: none"> using questioning to identify and confirm requirements use clear language and concepts appropriate to industry conventions when exchanging information
Numeracy skills to:	<ul style="list-style-type: none"> apply measurements and calculations to construction systems

Unit Mapping Information

Code and Title Current Version	Code and Title Previous Version	Comments
VU23443 Apply structural and	VU22456 Apply structural and	Equivalent unit.



	construction technology to the design of commercial buildings	construction technology to the design of commercial buildings	Updated to meet revised Standards for Accredited Courses unit template.
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Assessment Requirements Template

<p>Title</p>	<p>Assessment Requirements for VU23443 Apply structural and construction technology to the design of commercial buildings</p>
<p>Performance Evidence</p>	<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 principles of structural and construction to the design of at least two commercial buildings of Class 2-9 Type A, B or C drawn to industry standards with supporting evidence. <p>In completing the above there must also be evidence that the learner has, for each building design:</p> <ul style="list-style-type: none"> • complied with relevant national and Victorian regulatory frameworks and local council guidelines • developed supporting evidence that includes the following key property information: <ul style="list-style-type: none"> • site's feature • site risks: flood, termite, alpine classification • developed specifications for structural components of the building and the requirements for safe and healthy use of the building that includes: <ul style="list-style-type: none"> • footings systems • timber framing/steel framing • masonry • concrete • fire rating • health and amenity • cladding • joinery • services.
<p>Knowledge Evidence</p>	<p>The learner must be able to apply essential knowledge required to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the work role. This includes knowledge of:</p> <ul style="list-style-type: none"> • national regulatory framework, including the National Construction Code (NCC) and Australian standards, Victorian regulatory framework, local council guidelines relevant to the design, planning and construction of commercial buildings • legislative requirements for commercial buildings in relation to the design approval process



	<ul style="list-style-type: none"> • construction methods, standards in compliance with relevant legislation and design specifications • application of the structural principles of construction of commercial buildings, types and behaviour of loads • characteristics, performance and application of construction materials, including framing, masonry and finishes • working drawings and specifications for the design of commercial buildings • elements of site preparation, including existing site conditions and design and construction elements • integration of services in a commercial building design • statutory requirements for fire separation • specifications for a commercial building providing optimum safety, health and amenity for users
<p>Assessment Conditions</p>	<p>Skills in this unit must be demonstrated in a building design workplace or an environment that simulates workplace conditions.</p> <p>This includes access to:</p> <ul style="list-style-type: none"> • national regulatory framework, including the NCC and Australian Standards • Victorian regulatory framework • local council guidelines • relevant specifications and documentation • research resources, including industry-related information. <p>Assessor requirements</p> <p>No specialist vocational competency requirements for assessors apply to this unit.</p>

Unit code	VU23444
Unit title	Comply with relevant legislation in the design of residential buildings
Application	<p>This unit describes the performance outcomes, skills and knowledge required to access, interpret and apply relevant legislation to the design of residential buildings.</p> <p>It includes the ability to apply a range of design solutions for residential buildings (National Construction Code (NCC) Classes 1 and 10), in compliance with the national and Victorian regulatory frameworks and make recommendations for alternative solutions, as required.</p> <p>This unit applies to building designers who apply relevant legislation to the design of residential buildings within the legal responsibilities of building designers.</p> <p>No occupational licensing or legislative requirements apply to this unit at the time of publication. However, this unit forms part of a minimum qualification requirement for the registration class of Draftsperson, Building Design (Architectural) category, with the Victorian Building Authority.</p>
Pre-requisite Unit(s)	N/A
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	Classify buildings	1.1	Determine the nature of building according to use and arrangement.
		1.2	Determine the criteria of NCC to apply the defined classification.
2	Access and interpret relevant code and other legislative requirements	2.1	Identify hierarchy within the Victorian building and construction regulatory framework.
		2.2	Determine relevant NCC performance requirements and provisions that apply to residential buildings.
		2.3	Access and interpret Australian Standards.
		2.4	Determine the difference between the 'deemed to satisfy' (DTS) and 'performance based solutions'.
3	Analyse and document a	3.1	Identify and propose alternative solutions to a construction

range of solutions to the design problem		and design problem to comply with NCC requirements.
	3.2	Analyse assessment methods referenced in the NCC to determine whether a construction or design solution complies with performance based solutions or Deemed to Satisfy (DTS) provisions of the NCC.
	3.3	Identify and contribute to the documentation of performance-based solutions according to the NCC and the Victorian regulatory framework.
	3.4	Identify relevant documentation according to the requirements of relevant regulations.

Range of Conditions

N/A

Foundation Skills

Foundation Skills describe the language, literacy, numeracy and employability skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Reading skills to:	<ul style="list-style-type: none"> interpret key information from complex text that includes legislation, regulations, codes and standards
Writing skills to:	<ul style="list-style-type: none"> prepare detailed documentation using logical structure, clear language and industry terminology
Oral communication skills to:	<ul style="list-style-type: none"> using questioning to identify and confirm requirements use clear language and concepts appropriate to industry conventions when exchanging information
Numeracy skills to:	<ul style="list-style-type: none"> apply measurements and calculations to determine design solutions

Unit Mapping Information

Code and Title Current Version	Code and Title Previous Version	Comments
VU23444 Comply with relevant legislation in the design of residential buildings	VU22457 Comply with relevant legislation in the design of residential buildings	Equivalent unit. Updated to meet revised Standards for Accredited Courses unit template.

Assessment Requirements Template

<p>Title</p> <p>Performance Evidence</p>	<p>Assessment Requirements for VU23444 Comply with relevant legislation in the design of residential buildings</p> <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 relevant regulations, codes, standards and guidelines to at least two residential building projects that includes: <ul style="list-style-type: none"> • a new dwelling • an addition or alteration to an existing dwelling. <p>In completing the above there must also be evidence that the learner has, for each building project:</p> <ul style="list-style-type: none"> • identified and interpreted the building hierarchy of legislation and the associated compliance requirements relevant to the design or construction problem • referenced the performance solution within a drawing set • identified and documented alternative solutions to the design or construction problem in accordance with relevant codes.
<p>Knowledge Evidence</p>	<p>The learner must be able to apply essential knowledge required to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the work role. This includes knowledge of:</p> <ul style="list-style-type: none"> • national regulatory framework, including the National Construction Code (NCC) and Australian standards and Victorian regulatory framework relevant in the design of residential buildings • NCC in relation to: <ul style="list-style-type: none"> • performance hierarchy • definitions and common technical terms or usage • Classes 1 and 10 • building types, applications and limitations • general nature of materials and the effects of performance • assessment methods as specified in the NCC. • common design and construction issues that require a performance solution for new dwellings and additions /alterations for Class 1 and 10.
<p>Assessment Conditions</p>	<p>Skills in this unit must be demonstrated in a building design workplace or an environment that simulates workplace conditions.</p> <p>This includes access to:</p> <ul style="list-style-type: none"> • national regulatory framework, including the NCC and Australian Standards • Victorian regulatory framework • relevant specifications and work instructions. <p>Assessor requirements</p>

No specialist vocational competency requirements for assessors apply to this unit.



Unit code	VU23445
Unit title	Comply with relevant legislation in the design of commercial buildings
Application	<p>This unit describes the performance outcomes, skills and knowledge required to access, interpret and apply relevant legislation to the design of commercial buildings.</p> <p>It includes the ability to apply a range of design solutions to the construction or design of a commercial building (National Construction Code (NCC) Classes 2 to 9) and all types of construction (A, B, C) including minimum Type A, in compliance with the national and Victorian regulatory frameworks and make recommendations for alternative solutions as required.</p> <p>This unit applies to building designers who apply relevant legislation to the design of commercial buildings and within the legal responsibilities of building designers.</p> <p>No occupational licensing or legislative requirements apply to this unit at the time of publication. However, this unit forms part of a minimum qualification requirement for the registration class of Draftsperson, Building Design (Architectural) category, with the Victorian Building Authority.</p>
Pre-requisite Unit(s)	N/A
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	Classify buildings	1.1	Determine the nature of building according to use and arrangement.
		1.2	Determine the criteria of NCC to apply the defined type of construction A, B and C.
2	Access and interpret relevant code and other legislative requirements	2.1	Identify hierarchy within the Victorian building and construction regulatory framework.
		2.2	Determine relevant building performance requirements and provisions within the NCC that apply to Class 2 – 9 buildings and types of construction A, B and C.
		2.3	Access and interpret Australian Standards.

3	Analyse and document a range of solutions to the design problem	3.1	Identify and propose alternative solutions to a construction or design problem that comply with the requirements of the NCC.
		3.2	Analyse assessment methods referenced in the NCC to determine whether a construction or design solution complies with performance requirements or Deemed-to-Satisfy (DTS) provisions of the NCC.
		3.3	Identify and document performance-based solutions in accordance with the NCC.
		3.4	Identify relevant documentation according to the requirements of relevant regulations.

Range of Conditions

N/A

Foundation Skills

Foundation Skills describe the language, literacy, numeracy and employability skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Reading skills to:	<ul style="list-style-type: none"> interpret key information from complex text that includes legislation, regulations, codes and standards.
Writing skills to:	<ul style="list-style-type: none"> prepare detailed documentation using logical structure, clear language and industry terminology
Oral communication skills to:	<ul style="list-style-type: none"> using questioning to identify and confirm requirements use clear language and concepts appropriate to industry conventions when exchanging information
Numeracy skills to:	<ul style="list-style-type: none"> apply measurements and calculations to determine design solutions

Unit Mapping Information

Code and Title Current Version	Code and Title Previous Version	Comments
VU23445 Comply with relevant legislation in the design of commercial buildings	VU22458 Comply with relevant legislation in the design of commercial buildings	Equivalent unit. Updated to meet revised Standards for Accredited Courses unit template.



Assessment Requirements Template	
Title	Assessment Requirements for VU23445 Comply with relevant legislation in the design of commercial buildings
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 relevant codes, standards and guidelines to a design or construction problem of a specific commercial building project for a type A building. <p>In completing the above there must also be evidence that the learner has:</p> <ul style="list-style-type: none"> • identified and interpreted the building hierarchy of legislation and the associated compliance requirements relevant to the design or construction problem. • identified and documented alternative solutions to the design or construction problem in accordance with relevant legislation
Knowledge Evidence	<p>The learner must be able to apply essential knowledge required to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the work role. This includes knowledge of:</p> <ul style="list-style-type: none"> • national regulatory framework, including the National Construction Code (NCC) and Australian standards and Victorian regulatory framework relevant in the design of commercial buildings • NCC in relation to: <ul style="list-style-type: none"> • performance hierarchy • definitions and common technical terms or usage • Classes 2 and 9 • building types, Type A, B and C, applications and limitations • general nature of materials and the effects of performance • assessment methods as specified in the NCC.
Assessment Conditions	<p>Skills in this unit must be demonstrated in a building design workplace or an environment that simulates workplace conditions.</p> <p>This includes access to:</p> <ul style="list-style-type: none"> • national regulatory framework, including the NCC and Australian Standards • Victorian regulatory framework • relevant specifications and work instructions. <p>Assessor requirements</p> <p>No specialist vocational competency requirements for assessors apply to this unit.</p>

Unit code	VU23446
Unit title	Design safe buildings
Application	<p>This unit describes the performance outcomes, skills and knowledge required to apply safe design principles to control occupational health and safety (OHS)/work health and safety (WHS) risk during the life of a building.</p> <p>It includes the ability to identify legal responsibilities and obligations and evaluate OHS/WHS hazards associated with the design, construction and use of a building, consult with stakeholders and specialist advisors to make recommendations for safe design solutions and incorporate risk controls into the building design and end use.</p> <p>This unit applies to building designers who design safe buildings that comply with relevant legislation and within the legal responsibilities of building designers.</p> <p>No occupational licensing or legislative requirements apply to this unit at the time of publication. However, this unit forms part of a minimum qualification requirement for the registration class of Draftsperson, Building Design (Architectural) category, with the Victorian Building Authority.</p>
Pre-requisite Unit(s)	N/A
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	Investigate OHS/WHS requirements in the design process	1.1	Identify the legal responsibilities and obligations of building designers for the safety of end users and beneficiaries.
		1.2	Consult with stakeholders involved in the design and construction process to determine specific OHS/WHS issues.
		1.3	Research sources of current information and data of OHS/WHS principles, materials, technology and systems for application in the design and construction process.
		1.4	Consult with client to confirm the needs of those involved in the subsequent life cycle stages of the building.
2	Undertake hazard identification and	2.1	Conduct an OHS/WHS risk analysis across the life cycle of the building according to the hierarchy of control.



	OHS/WHS risk evaluation		
		2.2	Select OHS/WHS risk controls through a systematic analysis of the likelihood and consequences of exposure to the hazard.
		2.3	Identify a process for review of hazard identification and developed risk control to incorporate potential alterations to design decisions or specifications.
		2.4	Establish a residual risk register and circulate the information to those involved in the downstream or subsequent life cycle stages.
3	Produce designs to facilitate safe construction, use and maintenance of a building	3.1	Identify and communicate benefits of safe design to client.
		3.2	Consult with specialist advisers and incorporate their advice into the design as required.
		3.3	Inform client of any high risks in design requirements and alternatives.
		3.4	Incorporate preventative design measures to reduce or eliminate risk and facilitate the safe use and maintenance of the building according to legislative requirements.
		3.5	Provide relevant documentation to client for the end users and employees, to ensure safe and efficient operation and maintenance of the building.

Range of Conditions

N/A

Foundation Skills

Foundation Skills describe the language, literacy, numeracy and employability skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Reading skills to:	<ul style="list-style-type: none"> interpret key information from a range of sources, including code, legislation and regulations, research, workplace documentation, plans drawings and specifications
Writing skills to:	<ul style="list-style-type: none"> produce workplace documentation using clear language, industry terminology and in a logical format record notes on data and findings on historical and current information pertaining to OHS/WHS



Oral communication skills to:	<ul style="list-style-type: none"> • use questioning to identify and confirm requirements • use language and concepts appropriate to industry conventions to share information with client and stakeholders
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Unit Mapping Information

Code and Title Current Version	Code and Title Previous Version	Comments
VU23446 Design safe buildings	VU22459 Design safe buildings	Equivalent unit. Updated to meet revised Standards for Accredited Courses unit template.



Assessment Requirements Template	
Title	Assessment Requirements for VU23446 Design safe buildings
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"> produce details-for a building which complies with current OHS/WHS legislative requirements for the design, construction and use of a building. <p>In doing the above, there must also be evidence that the learner has:</p> <ul style="list-style-type: none"> consulted with at least one stakeholder to determine the safety requirements in the life cycle stages of the building conducted risk management processes for the identification of OHS/WHS hazards and selected design measures to reduce or eliminate safety hazards prepared a safe design report according to relevant OHS/WHS legislation.
Knowledge Evidence	<p>The learner must be able to apply essential knowledge required to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the work role. This includes knowledge of:</p> <ul style="list-style-type: none"> legislative responsibilities and obligations of building designers with regard to OHS/WHS at all stages of design, construction and end use of a building and consequences to clients, users and designers if this is not followed types of stakeholders involved in the design of safe buildings sources of information and data relevant to the design of safe buildings OHS/WHS risks and hazards, direct and indirect influences that impact on OHS/WHS and the environment in the design and use of a building safe design principles for person's lifecycle including age, mobility and disabilities principles and practices of a systematic approach to risk management basic principles of anthropometry as it applies to safe buildings hierarchy of control and considerations for deciding between different methods of control interdependent relationships between ergonomics and stressors, such as physiological factors, awkward posture, poor lighting and ventilation and thermal environment.
Assessment Conditions	<p>Skills in this unit must be demonstrated in a building design workplace or an environment that simulates workplace conditions.</p> <p>This includes access to:</p> <ul style="list-style-type: none"> national regulatory framework, including the NCC and Australian Standards Victorian regulatory framework relevant specifications and documentation, including working drawings, specifications and plans appropriate support materials

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- research resources, including OHS/WHS related information.

Assessor requirements

No specialist vocational competency requirements for assessors apply to this unit.



Unit code	VU23447
Unit title	Design sustainable buildings
Application	<p>This unit describes the performance outcomes, skills and knowledge required to apply the principles of sustainability to building designs.</p> <p>It includes the ability to apply sustainable practices to minimise negative impacts of the construction process and land use on the environment, incorporate passive design, sustainable water use and energy efficiency into a building design and select suitable materials for the construction of the building that comply with relevant legislation, the National Construction Code (NCC) and Australian Standards.</p> <p>This unit applies to building designers who design sustainable buildings within the context of relevant legislation and within the legal responsibilities of building designers.</p> <p>No occupational licensing or legislative requirements apply to this unit at the time of publication. However, this unit forms part of a minimum qualification requirement for the registration class of Draftsperson, Building Design (Architectural) category, with the Victorian Building Authority.</p>
Pre-requisite Unit(s)	N/A
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	Determine the impacts of building development on the natural environment	1.1	Research impacts of building development on surrounding ecosystems.
		1.2	Identify policies and legislation and representative organisations supporting environmentally sustainable design principles.
2	Incorporate sustainable criteria into building design	2.1	Identify and research the impact and characteristics of the location and specific climates to inform building design approaches.
		2.2	Determine sustainable design principles for the building design.
		2.3	Consider site influences and sun path to maximise opportunities for passive heating and cooling in the design.



		2.4	Incorporate passive design principles into the design project.
		2.5	Select and document the appropriate form of construction according to the energy performance provisions of the NCC.
3	Select sustainable materials	3.1	Identify and analyse characteristics of sustainable materials to inform material selection.
		3.2	Compare sustainability of a range of building materials and select suitable materials for the building design according to legislation, the NCC and Australian Standards.
4	Incorporate systems for sustainable water use	4.1	Incorporate systems for water collection, storage, use and re-use for the building design according to relevant legislation and local restrictions.
		4.2	Investigate alternative systems for reticulated water and effluent disposal.
		4.3	Investigate and incorporate strategies to manage stormwater run-off in the design.
5	Incorporate energy efficiency into building design	5.1	Identify energy efficient design principles according to legislation and the NCC.
		5.2	Research renewable energy sources for the building design and recommend best practice options for energy conservation.
		5.3	Determine the selection and use of energy efficient fittings, appliances and services for inclusion in design-

Range of Conditions

N/A

Foundation Skills

Foundation Skills describe the language, literacy, numeracy and employability skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Reading skills to:	<ul style="list-style-type: none"> interpret key information from complex text that includes legislation, regulations, codes and standards and research
Writing skills to:	<ul style="list-style-type: none"> prepare detailed documentation on data, findings, and recommendations for sustainable building design using logical structure, clear language and industry terminology
Oral communication skills to:	<ul style="list-style-type: none"> using questioning to identify and confirm requirements use clear language and concepts appropriate to industry conventions when exchanging information

Numeracy skills to:	<ul style="list-style-type: none"> apply measurements and calculations to sustainable building designs.
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Unit Mapping Information	Code and Title Current Version	Code and Title Previous Version	Comments
	VU23447 Design sustainable buildings	VU22460 Design sustainable buildings	Equivalent unit. Updated to meet revised Standards for Accredited Courses unit template.



Assessment Requirements Template	
Title	Assessment Requirements for VU23447 Design sustainable buildings
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 principles of sustainable building design to at least two building design projects. <p>In completing the above, there must also be evidence that the learner has for each design project:</p> <ul style="list-style-type: none"> • determined the relationship between climate zones, thermal comfort, energy usage and sustainable building design • determined criteria to develop sustainable strategies for the design of the building according to environmentally sustainable legislation • evaluated and recommended siting for passive design, sustainable materials and construction systems based on a sustainable criteria and relevant legislation.
Knowledge Evidence	<p>The learner must be able to apply essential knowledge required to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the work role. This includes knowledge of:</p> <ul style="list-style-type: none"> • national regulatory framework, including the National Construction Code (NCC) and Australian standards and Victorian regulatory framework relevant in the design of sustainable buildings • the NCC Deemed-to-Satisfy (DTS) energy efficiency provisions • drivers of climate change and mitigation initiatives: <ul style="list-style-type: none"> • the general impacts of climate change on the environment • effects of fossil fuels on the atmosphere • greenhouse gas emissions and ozone depletion consequences • impacts of national strategies on building design. • life cycle assessment principles • principles of sustainability, durability and energy efficiency in building design: <ul style="list-style-type: none"> • responsiveness to climate specific requirements • responsiveness to site topography and other site features • the nature of construction materials and their effects on thermal performance and durability • R values (overall thermal resistance) for construction material • indoor environmental quality (air quality, thermal comfort, acoustics) • software used to predict building performance.
Assessment Conditions	Skills in this unit must be demonstrated in a building design workplace or an environment that simulates workplace conditions.

This includes access to:

- national regulatory framework, including the NCC and Australian Standards
- Victorian regulatory framework
- local council guidelines
- relevant specifications and documentation, manufacturer's guidelines
- appropriate support materials
- research resources, including industry-related information.

Assessor requirements

No specialist vocational competency requirements for assessors apply to this unit.



Unit code	VU23448
Unit title	Integrate services layout into design documentation
Application	<p>This unit describes the performance outcomes, skills and knowledge required to integrate the layout of services and connections into building design documentation for residential (National Construction Code (NCC) Classes 1 and 10) and/or commercial (NCC Classes 2 to 9) buildings.</p> <p>It includes the ability to apply current sustainable and energy efficient practices and appliances and consult with other professionals to obtain agreement on service layout details and specifications.</p> <p>This unit applies to building designers who integrate services layout into building designs in compliance with relevant legislation, standards, codes and within the legal responsibilities of building designers.</p> <p>No occupational licensing or legislative requirements apply to this unit at the time of publication. However, this unit forms part of a minimum qualification requirement for the registration class of Draftsperson, Building Design (Architectural) category, with the Victorian Building Authority.</p>
Pre-requisite Unit(s)	N/A
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	Document layouts of water supply and hot water systems	1.1	Identify water supply, connection and layout for buildings connected to a town supply or a tank storage supply according to relevant regulatory framework requirements.
		1.2	Identify and document the installation of water services supplying fire hydrants, fire hose reels and fire sprinkler systems and interconnection of water tanks for fire services according to relevant regulatory framework requirements.
		1.3	Evaluate and document details of hot water systems according to suitability and energy rating to maximise energy efficiency.
2	Document sewerage and drainage disposal methods and layouts	2.1	Determine the availability of a sewerage connection to local authority assets.
		2.2	Identify disposal of sewerage from fixtures situated below

			the level of the local authority sewer for the building or to an onsite septic system according to local authorities and relevant regulatory framework requirements.
		2.3	Identify and document the design and installation of drainage systems and stormwater disposal methods according to relevant regulatory framework requirements.
3	Document methods and layout for ventilation, air-conditioning and fire protection systems	3.1	Evaluate and document methods and layout of mechanical ventilation and air-conditioning systems according to energy rating.
		3.2	Evaluate systems for natural ventilation to determine optimal building performance.
		3.3	Evaluate and document the requirements for fire protection systems for building classification according to relevant legislation.
4	Document natural and artificial lighting options	4.1	Evaluate design considerations for natural lighting to determine optimal user comfort according to Australian Standards for lighting levels.
		4.2	Compare artificial lighting and light sources to recommended service luminance according to relevant legislation.
5	Document electrical and electronic services layout	5.1	Evaluate and document electrical and electronic service systems and supply authorities.
		5.2	Evaluate and document design and installation of emergency warning systems, emergency lighting and exit signage according to relevant legislation.
		5.3	Evaluate and document methods of vertical transportation according to relevant legislation.
6	Finalise services layout	6.1	Confirm details of services layout and any required amendments with service engineer or other consultants.
		6.2	Check and sign off shop drawings and other relevant documentation against design specifications.

Range of Conditions

N/A

Foundation Skills

Foundation Skills describe the language, literacy, numeracy and employability skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
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Reading skills to:	<ul style="list-style-type: none"> interpret key information from legislation, documentation, drawings and specifications
Writing skills to:	<ul style="list-style-type: none"> accurately document details and specifications of services layout using clear language and industry terminology prepare documentation to the required format
Oral communication skills to:	<ul style="list-style-type: none"> using questioning to identify and confirm requirements communicate information using language and concepts appropriate to industry conventions
Numeracy skills to:	<ul style="list-style-type: none"> apply measurements to service installations
Digital literacy skills to:	<ul style="list-style-type: none"> use relevant computer software to produce documentation and perform calculations

Unit Mapping Information

Code and Title Current Version	Code and Title Previous Version	Comments
VU23448 Integrate services layout into design documentation	VU22461 Integrate services layout into design documentation	Equivalent unit. Updated to meet revised Standards for Accredited Courses unit template.



Assessment Requirements Template	
Title	Assessment Requirements for VU23448 Integrate services layout into design documentation
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"> • develop documentation which integrates services layout into the design of a residential or commercial building. <p>In completing the above, there must also be evidence that the learner has:</p> <ul style="list-style-type: none"> • consulted with other professionals to negotiate details of services layout • interpreted and complied with relevant legislation.
Knowledge Evidence	<p>The learner must be able to apply essential knowledge required to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the work role. This includes knowledge of:</p> <ul style="list-style-type: none"> • national regulatory framework, including the NCC and Australian Standards and Victorian regulatory framework relevant to integrating services layout in design documentation • nature of materials and effect on performance relating to service installations • working drawings and specifications relating to service installations • design concepts and principles relating to service installation • role and responsibilities of building designers, service engineers or other consultants relating to services layout • service installation terminology, definitions, installation methods and hazards in relation to devices and systems using the NCC, Australian Standard and manufacturer's guidelines • sustainability and energy efficiency principles and practices in relation to services installation.
Assessment Conditions	<p>Skills in this unit must be demonstrated in a building design workplace or an environment that simulates workplace conditions.</p> <p>This includes access to:</p> <ul style="list-style-type: none"> • national regulatory framework, including the NCC and Australian Standards • Victorian regulatory framework • specifications and documentation for services layout • research resources, including industry-related information. <p>Assessor requirements</p> <p>No specialist vocational competency requirements for assessors apply to this unit.</p>

Unit code	VU23449
Unit title	Produce preliminary and working drawings for residential buildings
Application	<p>This unit describes the performance outcomes, skills and knowledge required to produce two and three-dimensional drawings for residential buildings (National Construction Code (NCC) Classes 1 and 10).</p> <p>It includes the ability to read and interpret plans and specifications and to produce preliminary and working drawings for residential buildings to industry conventions.</p> <p>This unit applies to building designers who produce preliminary and working drawings for residential buildings within the context of relevant legislation and legal responsibilities of building designers.</p> <p>No occupational licensing or legislative requirements apply to this unit at the time of publication. However, this unit forms part of a minimum qualification requirement for the registration class of Draftsperson, Building Design (Architectural) category, with the Victorian Building Authority.</p>
Pre-requisite Unit(s)	N/A
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	Produce preliminary drawings	1.1	Identify the required preliminary drawings and key features to be recorded according to project brief and work requirements.
		1.2	Prepare and check drafting tools and equipment required for producing sketches/drawings for safety and serviceability.
		1.3	Create simple two and three-dimensional drawings to resolve construction details.
2	Read and interpret plans and specifications for residential building	2.1	Identify relevant plans and specifications to develop a set of working drawings.
		2.2	Locate, interpret and articulate key information according to relevant specifications and relevant legislation.
		2.3	Seek advice from client and other stakeholders to articulate

			and clarify any issues, as required.
3	Produce preliminary working drawings	3.1	Prepare working drawings for residential buildings according to standard drawing conventions and Australian Standards.
		3.2	Apply industry conventions to the production of building drawings.
4	Produce a set of working drawings	4.1	Complete working drawings to meet architectural conventions and relevant regulatory framework requirements.
		4.2	Check working drawings with team members for consistency of presentation, cross-referencing and accuracy and to ensure compliance with relevant legislation.

Range of Conditions

N/A

Foundation Skills

Foundation Skills describe the language, literacy, numeracy and employability skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Oral communication skills to:	<ul style="list-style-type: none"> using questioning to identify and confirm requirements use language and concepts appropriate to industry conventions
Numeracy skills to:	<ul style="list-style-type: none"> apply calculation and measuring techniques to drawings
Digital literacy skills to:	<ul style="list-style-type: none"> use computer software to enable production of working drawings and documentation

Unit Mapping Information

Code and Title Current Version	Code and Title Previous Version	Comments
VU23449 Produce preliminary and working drawings for residential buildings	VU22462 Produce preliminary and working drawings for residential buildings	Equivalent unit. Updated to meet revised Standards for Accredited Courses unit template.



Assessment Requirements Template

<p>Title</p> <p>Performance Evidence</p>	<p>Assessment Requirements for VU23449 Produce preliminary and working drawings for residential buildings</p> <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"> • produce a set of working drawings for two residential building projects according to scope of work that includes: <ul style="list-style-type: none"> • a new dwelling • an addition or alteration to an existing dwelling • one of the above dwellings must be of two storeys. <p>In completing the above there must also be evidence that the learner has, for each building project:</p> <ul style="list-style-type: none"> • complied with relevant legislation and specifications. • complete working drawings to industry conventions and as determined by the project brief.
<p>Knowledge Evidence</p>	<p>The learner must be able to apply essential knowledge required to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the work role. This includes knowledge of:</p> <ul style="list-style-type: none"> • types and purpose of preliminary drawings and working drawings used for residential buildings • drafting and drawing protocols used in preliminary and working drawings • standard drawing practices and features, including orientation, scale, key, contours, symbols and abbreviations • processes for the administration and preparation of documentation • processes for the interpretation of reports, working drawings, plans and specifications • structural, design and construction principles of residential buildings, types and behaviour of loads • national regulatory framework, including the NCC and Australian Standards relevant to producing drawings for residential buildings • functions and operation of computer software used to produce working drawings
<p>Assessment Conditions</p>	<p>Skills in this unit must be demonstrated in a building design workplace or an environment that simulates workplace conditions.</p> <p>This includes access to:</p> <ul style="list-style-type: none"> • national regulatory framework, including the NCC and Australian Standards • Victorian regulatory framework • local council guidelines • relevant specifications and work instructions • computer drafting software

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- research resources, including industry-related systems information.

Assessor requirements

No specialist vocational competency requirements for assessors apply to this unit.



Unit code	VU23450
Unit title	Produce preliminary and working drawings for commercial buildings
Application	<p>This unit describes the performance outcomes, skills and knowledge required to produce two and three-dimensional drawings for commercial buildings (National Construction Code (NCC) Classes 2 to 9 buildings and types of construction, A, B or C).</p> <p>It includes the ability to read and interpret plans and specifications and to produce preliminary and working drawings to industry conventions.</p> <p>This unit applies to building designers who produce preliminary and working drawings for commercial buildings within the context of relevant legislation and the legal responsibilities of building designers.</p> <p>No occupational licensing or legislative requirements apply to this unit at the time of publication. However, this unit forms part of a minimum qualification requirement for the registration class of Draftsperson, Building Design (Architectural) category, with the Victorian Building Authority.</p>
Pre-requisite Unit(s)	N/A
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	Produce preliminary drawings	1.1	Create simple two and three-dimensional preliminary drawings using Australian architectural drawings conventions according project brief and relevant legislation.
		1.2	Create sectional drawings of simple structural elements using architectural drawing conventions.
		1.3	Record essential information on drawings with symbols and abbreviations according to architectural drawing conventions and Australian Standards.
2	Read and interpret plans and specifications for a commercial building	2.1	Identify relevant plans and specifications to develop a set of working drawings.
		2.2	Locate, interpret and articulate key information according to relevant specifications and relevant legislation.
		2.3	Seek advice from client and other stakeholders to articulate



			and clarify any issues, as required.
3	Produce preliminary working drawings	3.1	Interpret requirements and criteria for preliminary working drawings according to the scope of the job being undertaken.
		3.2	Complete preliminary working drawings with annotated construction details according to relevant legislation.
4	Produce a set of working drawings	4.1	Negotiate and confirm scope of works and time frame for completion of drawings.
		4.2	Complete working drawings to meet architectural drawing conventions and relevant legislation.
		4.3	Complete detailed specifications on working drawings and to architectural conventions.
		4.4	Check working drawings for consistency of presentation, cross-referencing and accuracy and compliance with relevant legislation.

Range of Conditions

N/A

Foundation Skills

Foundation Skills describe the language, literacy, numeracy and employability skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Oral communication skills to:	<ul style="list-style-type: none"> using questioning to identify and confirm requirements use language and concepts appropriate to industry conventions
Numeracy skills to:	<ul style="list-style-type: none"> apply calculation and measuring techniques to drawings
Digital literacy skills to:	<ul style="list-style-type: none"> use computer software to enable production of working drawings and documentation

Unit Mapping Information

Code and Title Current Version	Code and Title Previous Version	Comments
VU23450 Produce preliminary and working drawings for commercial buildings	VU22463 Produce preliminary and working drawings for commercial buildings	Equivalent unit. Updated to meet revised Standards for Accredited Courses unit template.



OFFICIAL

OFFICIAL



Assessment Requirements Template	
Title	Assessment Requirements for VU23450 Produce preliminary and working drawings for commercial buildings
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"> • produce two and three-dimensional working drawings for a minimum of two commercial building projects of different types (Type A, B or C) according to scope of work. <p>In completing the above there must also be evidence that the learner has, for each building project:</p> <ul style="list-style-type: none"> • complied with relevant legislation and specifications. • complete working drawings to industry conventions and as determined by the project brief.
Knowledge Evidence	<p>The learner must be able to apply essential knowledge required to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the work role. This includes knowledge of:</p> <ul style="list-style-type: none"> • types and purpose of preliminary drawings and working drawings used for commercial buildings • drafting and drawing protocols used in preliminary and working drawings • Australian architectural drawing conventions and features including orientation, scale, key, contours, symbols and abbreviations • processes for the administration and preparation of documentation • processes for the interpretation of reports, working drawings, plans and specifications • structural, design and construction principles of commercial buildings, types and behaviour of loads • national regulatory framework, including the NCC and Australian Standards relevant to producing drawings for commercial buildings • functions and operation of computer software used to produce working drawings
Assessment Conditions	<p>Skills in this unit must be demonstrated in a building design workplace or an environment that simulates workplace conditions.</p> <p>This includes access to:</p> <ul style="list-style-type: none"> • national regulatory framework, including the NCC and Australian Standards • Victorian regulatory framework • local council guidelines • relevant specifications and work instructions • computer drafting software • research resources, including industry-related systems information. <p>Assessor requirements</p> <p>No specialist vocational competency requirements for assessors apply to this</p>

unit.



Unit code	VU23451
Unit title	Select construction materials for building projects
Application	<p>This unit describes the performance outcomes, skills and knowledge required to evaluate and select suitable construction materials for building projects in Australia.</p> <p>It includes the ability to analyse properties and characteristics of the materials against a range of criteria, including physical attributes, cost, and sustainability, to determine their suitability for application in the construction of a building.</p> <p>This unit applies to building designers who select suitable construction materials for buildings within the context of relevant legislation and the legal responsibilities of building designers.</p> <p>No occupational licensing or legislative requirements apply to this unit at the time of publication. However, this unit forms part of a minimum qualification requirement for the registration class of Draftsperson, Building Design (Architectural) category, with the Victorian Building Authority.</p>
Pre-requisite Unit(s)	N/A
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	Analyse characteristics of construction materials	1.1	Research manufacturing processes of the range of construction materials to be used at different stages of construction to establish limitations of practical application.
		1.2	Investigate quality standards and performance of materials for adherence to the relevant legislation and the suitability for types of structures and environment.
		1.3	Analyse materials to determine their application and compatibility with regard to substructures, fixings, coatings or finishes and/or specific construction systems, visual effect and environment.
		1.4	Research material tolerances and identify issues arising from incompatible use.
		1.5	Record relevant information for future reference.
2	Evaluate materials for their suitability for	2.1	Investigate materials to identify their sustainable



	building projects		characteristics to minimise their environmental impact.
		2.2	Analyse materials for their thermal and acoustic characteristics to determine appropriate applications according to relevant legislation, NCC and Australian Standards.
		2.3	Analyse materials to determine durability, structural integrity, and fire resistance to determine appropriate applications according to relevant legislation, NCC and Australian Standards.
		2.4	Investigate defects, short and long-term degradation, timber preservation and protection of metals to determine appropriate applications according to relevant legislation, NCC and Australian Standards.
		2.5	Investigate transportation, on-site storage requirements and handling of materials to determine their impact on construction methodology and occupational health and safety (OHS)/work health and safety (WHS) level of risk.
3	Recommend suitable materials	3.1	Select construction materials according to their purpose, standard application and manufacturer's guidelines.
		3.2	Recommend construction materials and interior finish products for specific attributes and characteristics according to design specifications.
		3.3	Determine and record specifications for construction materials.

Range of Conditions

N/A

Foundation Skills

Foundation Skills describe the language, literacy, numeracy and employability skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Reading skills to:	<ul style="list-style-type: none"> interpret key information from legislation, plans, drawings and specifications
Writing skills to:	<ul style="list-style-type: none"> document data and findings using clear language and terminology
Oral communication skills to:	<ul style="list-style-type: none"> using questioning to identify and confirm requirements share information using language and concepts appropriate to industry conventions
Numeracy skills to:	<ul style="list-style-type: none"> apply measurements and calculations for material selection



**Unit Mapping
Information**

Code and Title Current Version	Code and Title Previous Version	Comments
VU23451 Select construction materials for building projects	VU22464 Select construction materials for building projects	Equivalent unit. Updated to meet revised Standards for Accredited Courses unit template.

Assessment Requirements Template

Title

Assessment Requirements for VU23451 Select construction materials for building projects

Performance Evidence

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:

- select at least two construction materials for all of the following elements of a building project:
 - footings
 - floor structure
 - wall structure
 - roof structure
 - roof cladding
 - wall cladding
 - internal wall lining and window frames.

In completing the above, there must also be evidence that the learner has:

- analysed and evaluated the construction materials for their application and sustainability, including glass, steel, timber, concrete and bricks
- evaluated materials for their compliance with the legislative requirements of thermal acoustic and fire-resistant qualities of construction materials.
- made recommendations for suitable materials to satisfy construction requirements, aesthetics, cost effectiveness, design brief and legislative requirements.

Knowledge Evidence

The learner must be able to apply essential knowledge required to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the work role. This includes knowledge of:

- national regulatory framework, including the NCC and Australian Standards and Victorian regulatory framework relevant to selecting material for building projects
- new and emerging, types of construction materials
- potential issues relating to supply chain, safety and sustainability
- structural, thermal, acoustic and visual properties of materials and how these are utilised to achieve a desired outcome and meet specifications and legislative requirements
- durability, weather resistance, jointing, thermal expansion, compatibility of materials
- substructures, jointing systems and fixings required to incorporate materials into a building.
- effect of substructures on the use of materials
- effect of transport, handling and storage on materials
- principles of designing buildings for durability and adaptability
- life cycle assessment principles
- environmental impact issues relating to material selection and use
- sustainable characteristics of materials

	<ul style="list-style-type: none"> grading process used to categorise timber and timber products safety data sheets (SDS) purpose and content.
Assessment Conditions	<p>Skills in this unit must be demonstrated in a building design workplace or an environment that simulates workplace conditions.</p> <p>This includes access to:</p> <ul style="list-style-type: none"> national regulatory framework, including the NCC and Australian Standards Victorian regulatory framework relevant specifications and documentation, including building plans and specifications relevant material selection criteria support materials, including current information and data on the characteristics and use of construction materials samples of construction materials or material specifications. <p>Assessor requirements</p> <p>No specialist vocational competency requirements for assessors apply to this unit.</p>

Unit code	VU23452
Unit title	Provide design solutions for residential buildings
Application	<p>This unit describes the performance outcomes, skills and knowledge required to apply the theories and principles of design to the design of residential buildings (National Construction Code (NCC) Classes 1 and 10) construction.</p> <p>It requires the ability to research, analyse and evaluate information on the history and elements of architecture and their influence on current practice. It includes developing a design response, which meets the requirements of a project brief, and communicating a final design solution to relevant stakeholders.</p> <p>This unit applies to building designers who apply the principles, theories and emerging trends of design to residential building projects within the legal responsibilities of building designers.</p> <p>No occupational licensing or legislative requirements apply to this unit at the time of publication. However, this unit forms part of a minimum qualification requirement for the registration class of Draftsperson, Building Design (Architectural) category, with the Victorian Building Authority.</p>
Pre-requisite Unit(s)	N/A
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 the key elements of architecture in residential building design	1.1	Identify architectural terminology and language for application in research.
		1.2	Identify emerging residential design trends and key themes of change to inform application in practice
		1.3	Develop knowledge of Australian architecture through review and critical analysis of the design concept, influences and features of recognised works and emerging trends.
		1.4	Identify and record the principal characteristics of residential architectural styles.
		1.5	Review elements of global architecture for their influence on



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			Australian regional residential architecture.
2	Determine principles for residential building design	2.1	Research sound and innovative design solutions-and analyse its application to identify tectonic concept.
		2.2	Explore the relationship between art, architecture and nature to explore the intent of the design and determine the application of form, functionality and aesthetics in design.
		2.3	Research the relationship of human behaviour, functionality of spaces and aesthetics of architectural facades
3	Apply design principles to the context of a residential building site	3.1	Analyse the project brief to determine client requirements for the design.
		3.2	Analyse the correlation between human behaviour, function, aesthetics, typology, neighbourhood character and site context to determine patterns of movement, spatial relationships and the visual goals determined by the project brief.
		3.3	Develop circulation patterns/bubble diagrams to illustrate patterns of movement and spatial relationships.
		3.4	Integrate social, sustainable and technical factors according to relevant building and planning regulatory requirements and contextual and site restraints.
		3.5	Establish information of precedent buildings to facilitate application to current concept development.
		3.6	Analyse and apply planning controls to design to comply with local council regulations.
4	Develop and express ideas through freehand sketching	4.1	Produce sketches using appropriate media to interpret design solutions and concepts and to illustrate details of construction, structural and aesthetic elements of the design.
		4.2	Use visualisation techniques to enhance readability and interpretation and to display a range of material finishes.
		4.3	Produce sketches with accurate proportions and according to project timelines.
5	Resolve and communicate design solutions to a residential built form	5.1	Evaluate and integrate architectural theories to a conceptual program.
		5.2	Research features of comparable building designs to inform the development of the design solution.

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	5.3	Combine design theories, concepts and ideas to produce the design solution.
	5.4	Integrate elements of human needs, environment, sustainability, technology and Livable Housing Design Guidelines into the concept design.
	5.5	Review a range of design options and select the most appropriate for development.
	5.6	Confirm the developed design solution against the project brief and communicate to relevant stakeholders through appropriate presentation media.

Range of Conditions

N/A

Foundation Skills

Foundation Skills describe the language, literacy, numeracy and employability skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Reading skills to:	<ul style="list-style-type: none"> interpret key information from architectural literature and texts, design briefs, drawings and specifications, Australian Standards, code and legislation
Writing skills to:	<ul style="list-style-type: none"> document research on the influences of global architecture and design principles produce freehand and enhanced sketches for the interpretation of a design or of architectural features
Oral communication skills to:	<ul style="list-style-type: none"> using questioning to identify and confirm requirements present design solutions using language and concepts appropriate to industry conventions
Numeracy skills to:	<ul style="list-style-type: none"> apply measurements and calculations to residential design solutions

Unit Mapping Information

Code and Title Current Version	Code and Title Previous Version	Comments
VU23452 Provide design solutions for residential buildings	VU22465 Provide design solutions for residential and commercial buildings	Non-equivalent unit Title change Content split into two units Updated to meet



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			revised Standards for Accredited Courses unit template.
	VU23453 Provide design solutions for commercial buildings	VU22465 Provide design solutions for residential and commercial buildings	Non-equivalent unit Title change Content split into two units Updated to meet revised Standards for Accredited Courses unit template.

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Assessment Requirements Template	
Title	Assessment Requirements for VU23452 Provide design solutions for residential buildings
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"> develop design solutions that meet the requirements of the project brief, planning and regulatory controls for at least two residential designs based on NCC Classes 1 and 10 <p>In completing the above, there must also be evidence that the learner has, for each design solution:</p> <ul style="list-style-type: none"> applied architectural concepts to the built form communicated the design solutions to stakeholders using presentation media.
Knowledge Evidence	<p>The learner must be able to apply essential knowledge required to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the work role. This includes knowledge of:</p> <ul style="list-style-type: none"> global and Australian architectural styles and trends, architects and designers and their influences on modern design theories and design solutions for residential buildings architectural terminology and semantics related to residential buildings. design processes used to provide design solutions for residential buildings architectural concepts applied to residential design solutions principles of universal design basic principles of anthropometrics and ergonomics material characteristics and application tectonic themes principles of human behaviour, spatial functionality and aesthetics historical and modern design principles current and emerging residential design trends national regulatory framework, including the NCC and Australian Standards and Victorian regulatory framework relevant to providing design solutions for residential building projects regulatory, contextual and site constraints planning concepts used for presenting design solutions presentation media used to present design solutions for residential buildings.
Assessment Conditions	<p>Skills in this unit must be demonstrated in a building design workplace or an environment that simulates workplace conditions.</p> <p>This includes access to:</p> <ul style="list-style-type: none"> national regulatory framework, including the NCC and Australian Standards Victorian regulatory framework

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- relevant specifications and documentation
 - images of significant buildings reflecting specific architectural styles and features
 - research resources, including architectural literature.

Assessor requirements

No specialist vocational competency requirements for assessors apply to this unit.

Unit code	VU23453
Unit title	Provide design solutions for commercial buildings
Application	<p>This unit describes the performance outcomes, skills and knowledge required to apply the theories and principles of design to the design of commercial buildings ((National Construction Code (NCC) Classes 2 to 9) of A or Type B or C construction.</p> <p>It requires the ability to research, analyse and evaluate information on the history and elements of architecture and their influence on current practice. It includes developing a design response, which meets the requirements of a project brief, and communicating a final design solution to relevant stakeholders.</p> <p>This unit applies to building designers who apply the principles, theories and emerging trends of design to commercial building projects within the legal responsibilities of building designers.</p> <p>No occupational licensing or legislative requirements apply to this unit at the time of publication. However, this unit forms part of a minimum qualification requirement for the registration class of Draftsperson, Building Design (Architectural) category, with the Victorian Building Authority.</p>
Pre-requisite Unit(s)	N/A
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	Identify the key elements of global architecture in commercial building design	1.1	Identify architectural terminology and language for application in research.
		1.2	Identify emerging commercial design trends and key themes of change to inform application in practice
		1.3	Develop an understanding of global architecture through review and critical analysis of the influences and features of recognised works and emerging trends.
		1.4	Examine and record characteristics of commercial architectural styles.
2	Determine principles for commercial building	2.1	Identify principles of design theories to inform and compare, methods and practice.

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	design		
		2.2	Research design solutions to identify tectonic concept.
		2.3	Explore the intent of the design to-determine the application of form, functionality, and aesthetics in design.
		2.4	Research the relationship of human behaviour, functionality of spaces and aesthetics of architectural facades.
3	Apply design principles to the context of a commercial building site	3.1	Analyse the project brief to determine client requirements for the design.
		3.2	Analyse the correlation between human behaviour, function, aesthetics, typology, neighbourhood character and site context to determine patterns of movement, spatial relationships and the visual goals determined by the project brief.
		3.3	Develop circulation patterns/bubble diagrams to illustrate patterns of movement and spatial relationships.
		3.4	Integrate social, sustainable and technical factors according to relevant building and planning regulatory requirements and contextual and site restraints.
		3.5	Establish information of precedent buildings to facilitate application to current concept development.
		3.6	Analyse and apply town planning controls to design to comply with local council regulations.
4	Develop and express concepts	4.1	Produce sketches to explain design solutions and concepts using appropriate media to illustrate details of construction, structural and aesthetic elements of the design.
		4.2	Use visualisation techniques to enhance readability and interpretation and to display a range of material finishes.
		4.3	Produce sketches with accurate proportions and according to project timelines.
5	Resolve and communicate design solutions to a commercial built form	5.1	Evaluate and intergrade architectural theories to a program.
		5.2	Develop design solutions which meet the requirements of the project brief, planning and regulatory controls.
		5.3	Combine design theories, concepts and ideas to produce the design solution.
		5.4	Integrate elements of human needs, environment, sustainability and technology into the concept design.

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	5.5	Develop and review a range of alternative responses and select the most suitable solution for presentation to relevant stakeholders.
	5.6	Confirm final design solution against the project brief and communicate to relevant stakeholders through appropriate presentation media.

Range of Conditions

N/A

Foundation Skills

Foundation Skills describe the language, literacy, numeracy and employability skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Reading skills to:	<ul style="list-style-type: none"> interpret key information from architectural literature and texts, design briefs, drawings and specifications, Australian Standards, code and legislation
Writing skills to:	<ul style="list-style-type: none"> document research on the influences of global architecture and design principles produce freehand and enhanced sketches for the interpretation of a design or of architectural features
Oral communication skills to:	<ul style="list-style-type: none"> using questioning to identify and confirm requirements present design solutions using language and concepts appropriate to industry conventions
Numeracy skills to:	<ul style="list-style-type: none"> apply measurements and calculations to commercial design solutions

Unit Mapping Information

Code and Title Current Version	Code and Title Previous Version	Comments
VU23453 Provide design solutions for commercial buildings	VU22465 Provide design solutions for residential and commercial buildings	Non-equivalent unit Title change Content split into two units Updated to meet revised Standards for Accredited Courses unit template
VU23452 Provide design solutions for	VU22465 Provide design solutions for residential and	Non-equivalent unit Title change

	residential buildings	commercial buildings	Content split into two units Updated to meet revised Standards for Accredited Courses unit template
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Assessment Requirements Template	
Title	Assessment Requirements for VU23453 Provide design solutions for commercial buildings
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"> • develop design solutions which meet the requirements of the project brief, town planning and regulatory controls for at least two commercial designs based on NCC Classes 2 to 9 of Type A, B or C construction. <p>In completing the above, there must also be evidence that the learner has, for each design solution:</p> <ul style="list-style-type: none"> • applied architectural concepts to the built form. • communicated the design solutions to stakeholders using presentation media.
Knowledge Evidence	<p>The learner must be able to apply essential knowledge required to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the work role. This includes knowledge of:</p> <ul style="list-style-type: none"> • global and Australian architectural styles and trends, architects and designers and their influences on modern design theories and design solutions for commercial buildings • architectural terminology and semantics related to commercial buildings. • design processes used to provide design solutions for commercial buildings • architectural concepts applied to commercial design solutions. • principles of structural and construction technology • principles of universal design • basic principles of anthropometrics and ergonomics • material characteristics and application • tectonic themes • principles of human behaviour, functionality of spaces and aesthetics • historical and modern design principles • current and emerging commercial design trends • national regulatory framework, including the NCC and Australian Standards and Victorian regulatory framework relevant to providing design solutions for commercial building projects. • regulatory, contextual and site constraints • presentation media used to present design solutions for commercial buildings.
Assessment Conditions	<p>Skills in this unit must be demonstrated in a building design workplace or an environment that simulates workplace conditions.</p> <p>This includes access to:</p> <ul style="list-style-type: none"> • national regulatory framework, including the NCC and Australian Standards • Victorian regulatory framework

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- relevant specifications and documentation
 - images of significant buildings reflecting specific architectural styles and features
 - research resources, including architectural literature.

Assessor requirements

No specialist vocational competency requirements for assessors apply to this unit.

Unit code	VU23454
Unit title	Integrate digital applications into residential architectural workflows
Application	<p>This unit describes the performance outcomes, skills and knowledge required to use digital applications and the production of outputs in architectural workflows for (National Construction Code (NCC) Classes 1 and 10) residential buildings.</p> <p>It includes the ability to determine the workflows and appropriate digital applications required for specific project outputs and the application of architectural standards and conventions to produce and manage the project.</p> <p>This unit applies to building designers who utilise digital applications to produce digital drawings and data for residential architectural projects within the legal responsibilities of building designers.</p> <p>No occupational licensing or legislative requirements apply to this unit at the time of publication. However, this unit forms part of a minimum qualification requirement for the registration class of Draftsperson, Building Design (Architectural) category, with the Victorian Building Authority.</p>
Pre-requisite Unit(s)	N/A
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	Determine architectural workflows for residential building project	1.1	Investigate data management system, organisational standards and overall practice workflows for the residential building project.
		1.2	Establish individual workflows for project to maximise productivity within given time frames.
		1.3	Determine team strategies to enable collaboration between participants of the project team.
2	Analyse project requirements to determine outputs	2.1	Evaluate project brief to determine digital applications and data requirements within the project scope.
		2.2	Identify relevant external stakeholders and internal personnel to plan development of documents according to order of precedence and agreed timelines.



		2.3	Identify digital security and copyright and privacy workplace procedures for the communication of documents.
		2.4	Evaluate hardware requirements to determine their limitations and suitability.
		2.5	Plan work according to relevant legislation, the National Construction Code (NCC) requirements and Australian Standards.
3	Select project formats	3.1	Select appropriate application to produce required documentation.
		3.2	Determine and create digital protocols to develop project documentation according to workplace policy and client requirements.
4	Produce digital data for projects	4.1	Apply file formats, transfer protocols and standards to enable the use of data in chosen applications.
		4.2	Select and create object data and component libraries for implementation in project outputs.
		4.3	Confirm that digital data complies with relevant Australian Industry practices
5	Produce project outputs	5.1	Select digital and physical output methods according to industry standard delivery methods, client and stakeholder requirements.
		5.2	Identify and implement conventions and standards related to layout and print sizing, for both physical and digital outputs.
		5.3	Examine and select digital and physical communication conventions based on cost effectiveness and sustainability.
		5.4	Produce interim draft output and digital communications to confirm that outputs meet project requirements, and make modifications, as required.
		5.5	Produce final output of project documentation for submission to relevant stakeholders according to Industry practices
		5.6	Evaluate outputs against planned project outcomes.
		5.7	Create outputs achievable from identified digital data workflows.

Range of Conditions

N/A

Foundation Skills

Foundation Skills describe the language, literacy, numeracy and employability skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Reading skills to:	<ul style="list-style-type: none"> interpret key information from legislation, regulations, codes and standards, construction drawings and specifications
Writing skills to:	<ul style="list-style-type: none"> produce documentation using clear language, accurate data and information
Oral communication skills to:	<ul style="list-style-type: none"> use questioning to identify and confirm requirements use language and concepts appropriate to industry conventions when communicating with team members and stakeholders
Numeracy skills to:	<ul style="list-style-type: none"> apply measurements and calculations to data input and workflows
Digital literacy skills to:	<ul style="list-style-type: none"> use software applications suitable for production of documentation required for the residential building project engage and interact with digital and electronic distributed information

Unit Mapping Information

Code and Title Current Version	Code and Title Previous Version	Comments
VU23454 Integrate digital applications into residential architectural workflows	VU22466 Integrate digital applications into architectural workflows	Non-equivalent unit Title change Content split into two units Updated to meet revised Standards for Accredited Courses unit template
VU23455 Integrate digital applications into commercial architectural workflows	VU22466 Integrate digital applications into architectural workflows	Non-equivalent unit Title change Content split into two units Updated to meet revised Standards for Accredited Courses unit template

Assessment Requirements Template	
Title	Assessment Requirements for VU23454 Integrate digital applications into residential architectural workflows
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 a range of digital applications to produce outputs in architectural workflows for at least two residential building projects. <p>In completing the above, there must also be evidence that the learner has:</p> <ul style="list-style-type: none"> • produced the required digitally generated presentation and working drawings for the project • complied with relevant legislation, standards, and workplace digital security and copyright and privacy workplace procedures • collaborated and consulted effectively with team members and outside agencies • met the criteria of the project brief and allocated timelines.
Knowledge Evidence	<p>The learner must be able to apply essential knowledge required to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the work role. This includes knowledge of:</p> <ul style="list-style-type: none"> • national regulatory framework, including the National Construction Code (NCC) and Australian standards and Victorian regulatory framework relevant to applying digital applications for residential architectural projects • functions, operation, and management of software programs required for the production of various stages of project documentation • features of file structures for Building Information Modelling (BIM) management • standards and conventions used in the production and management of architectural documentation, including: <ul style="list-style-type: none"> • recognition of file structures • development and use of file structures • Australian and International Standards for BIM data sharing • purpose and benefits of project outputs to related contexts • construction and materials technology in the production of architectural documentation • workplace quality requirements for the production of digital outputs • workplace and legislative requirements for documentation in all stages of the residential building design project
Assessment Conditions	<p>Skills in this unit must be demonstrated in a building design workplace or an environment that simulates workplace conditions.</p> <p>This includes access to:</p> <ul style="list-style-type: none"> • national regulatory framework, including the NCC and Australian Standards



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- Victorian regulatory framework
 - appropriate computer hardware and software
 - architectural conventions and workplace procedures
 - task sheets, sample drawings and supporting documentation, as required.

Assessor requirements

No specialist vocational competency requirements for assessors apply to this unit.

Unit code	VU23455
Unit title	Integrate digital applications into commercial architectural workflows
Application	<p>This unit describes the performance outcomes, skills and knowledge required to use digital applications and the production of outputs in architectural workflows for (National Construction Code (NCC) Classes 2 to 9) commercial buildings using building information modelling (BIM) software.</p> <p>It includes the ability to determine the workflows and appropriate digital applications required for specific project outputs and the application of architectural standards and conventions to produce and manage the project.</p> <p>This unit applies to building designers who utilise digital applications to produce digital drawings and data for commercial architectural projects within the legal responsibilities of building designers.</p> <p>No occupational licensing or legislative requirements apply to this unit at the time of publication. However, this unit forms part of a minimum qualification requirement for the registration class of Draftsperson, Building Design (Architectural) category, with the Victorian Building Authority.</p>
Pre-requisite Unit(s)	N/A
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	Determine architectural workflows for commercial building project	1.1	Investigate data management system, organisational standards and overall practice workflows for the commercial building project.
		1.2	Establish individual workflows for project to maximise productivity within given time frames.
		1.3	Determine team strategies to enable collaboration between participants of the project team.
2	Analyse project requirements to determine outputs	2.1	Evaluate project brief to determine digital applications and data requirements within the project scope.
		2.2	Identify relevant external stakeholders and internal personnel to plan development of documents according to



			order of precedence and agreed timelines.
		2.3	Identify digital security and copyright and privacy workplace procedures for the communication of documents.
		2.4	Evaluate hardware requirements to determine their limitations and suitability.
		2.5	Plan work according to relevant legislation, the National Construction Code (NCC) requirements and Australian Standards.
3	Select project formats	3.1	Select appropriate BIM application to produce required documentation.
		3.2	Determine and create digital protocols to develop project documentation according to workplace policy and client requirements.
4	Produce digital data for projects	4.1	Apply file formats, transfer protocols and standards to enable the use of data in chosen applications.
		4.2	Select and create object data and component libraries for implementation in project outputs.
		4.3	Confirm that digital data complies with relevant standards and regulatory requirements
5	Produce project outputs	5.1	Select digital and physical output methods according to industry standard delivery methods, client and stakeholder requirements.
		5.2	Identify and implement conventions and standards related to layout and print sizing, for both physical and digital outputs.
		5.3	Examine and select digital and physical communication conventions based on cost effectiveness and sustainability.
		5.4	Produce interim draft output and digital communications to confirm that outputs meet project requirements, and make modifications, as required.
		5.5	Produce final output of project documentation for submission to relevant stakeholders according to regulatory requirements.
		5.6	Evaluate outputs against planned project outcomes.
		5.7	Create outputs achievable from identified digital data workflows.

Range of Conditions

N/A



Foundation Skills

Foundation Skills describe the language, literacy, numeracy and employability skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Reading skills to:	<ul style="list-style-type: none"> interpret key information from legislation, regulations, codes and standards, construction drawings and specifications
Writing skills to:	<ul style="list-style-type: none"> produce documentation using clear language, accurate data and information
Oral communication skills to:	<ul style="list-style-type: none"> use questioning to identify and confirm requirements use language and concepts appropriate to industry conventions when communicating with team members and stakeholders
Numeracy skills to:	<ul style="list-style-type: none"> apply measurements and calculations to data input and workflows
Digital literacy skills to:	<ul style="list-style-type: none"> use software applications suitable for production of documentation required for the commercial building project engage and interact with digital and electronic distributed information

Unit Mapping Information

Code and Title Current Version	Code and Title Previous Version	Comments
VU23455 Integrate digital applications into commercial architectural workflows	VU22466 Integrate digital applications into architectural workflows	Non-equivalent unit Title change Content split into two units Updated to meet revised Standards for Accredited Courses unit template
VU23454 Integrate digital applications into residential architectural workflows	VU22466 Integrate digital applications into architectural workflows	Non-equivalent unit Title change Content split into two units Updated to meet revised Standards for Accredited Courses unit template



Assessment Requirements Template	
Title	Assessment Requirements for VU23455 Integrate digital applications into commercial architectural workflows
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 a range of building information modelling (BIM) applications to produce outputs in architectural workflows for a minimum of two commercial building projects. <p>In completing the above, there must be evidence that the learner has:</p> <ul style="list-style-type: none"> produced the required digitally generated presentation and working drawings for the project complied with relevant legislation, standards, and workplace digital security and copyright and privacy workplace procedures collaborated and consulted effectively with team members and outside agencies met the criteria of the project brief and allocated timelines.
Knowledge Evidence	<p>The learner must be able to apply essential knowledge required to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the work role. This includes knowledge of:</p> <ul style="list-style-type: none"> national regulatory framework, including the National Construction Code (NCC) and Australian standards and Victorian regulatory framework relevant to applying digital applications for commercial architectural projects functions, operation and management of software programs required for the production of various stages of project documentation features of file structures for BIM management standards and conventions used in the production and management of architectural documentation, including: <ul style="list-style-type: none"> recognition of file structures development and use of file structures Australian and International Standards for BIM data sharing purpose and benefits of project outputs to related contexts construction and materials technology in the production of architectural documentation workplace quality requirements for the production of digital outputs workplace and legislative requirements for documentation in all stages of the commercial building design project
Assessment Conditions	<p>Skills in this unit must be demonstrated in a building design workplace or an environment that simulates workplace conditions.</p> <p>This includes access to:</p> <ul style="list-style-type: none"> national regulatory framework, including the NCC and Australian Standards

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- Victorian regulatory framework
 - appropriate computer hardware and software
 - architectural conventions and workplace procedures
 - task sheets, sample drawings and supporting documentation, as required.

Assessor requirements

No specialist vocational competency requirements for assessors apply to this unit.



Unit code	VU23456
Unit title	Present architectural designs
Application	<p>This unit describes the performance outcomes, skills and knowledge required to plan, develop and present design concepts for residential (National Construction Code (NCC) Classes 1 and 10) or commercial (NCC Classes 2 to 9) building architectural projects to stakeholders.</p> <p>It requires the ability to review the project brief, develop presentation materials such as freehand or digital preliminary drawings, computer generated drawings/images, or models, and effectively communicate and clarify the final design concept to relevant stakeholders.</p> <p>This unit applies to building designers who present their architectural designs to stakeholders within the legal responsibilities of building designers.</p> <p>No occupational licensing or legislative requirements apply to this unit at the time of publication. However, this unit forms part of a minimum qualification requirement for the registration class of Draftsperson, Building Design (Architectural) category, with the Victorian Building Authority.</p>
Pre-requisite Unit(s)	N/A
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 presentation	1.1	Review project brief to confirm presentation requirements.
		1.2	Select presentation format according to project brief.
		1.3	Confirm presentation format and materials are appropriate with relevant stakeholders.
		1.4	Determine individual responsibilities and time frames.
2	Produce presentation images and/or models	2.1	Select presentation equipment to suit presentation format and purpose for project brief.
		2.2	Produce final drawings and/or models for presentation within agreed time frames and to industry standards.
		2.3	Produce presentation materials to aid better comprehension of final design.
3	Make presentation	3.1	Organise equipment and materials for presentation.

	3.2	Present the design concept using communication techniques to capture and maintain the interest of the stakeholders.
	3.3	Provide opportunities for stakeholders to seek clarification on central concepts and ideas and adjust presentation, as required.
	3.4	Summarise key concepts at strategic points in the presentation to facilitate stakeholders understanding.

Range of Conditions

N/A

Foundation Skills

Foundation Skills describe the language, literacy, numeracy and employability skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Reading skills to:	<ul style="list-style-type: none"> interpret key information from project brief and architectural documentation
Writing skills to:	<ul style="list-style-type: none"> communicate design ideas and concepts in sketch format
Oral communication skills to:	<ul style="list-style-type: none"> use questioning to identify and confirm requirements present information using clear language and concepts appropriate to industry conventions
Technology skills to:	<ul style="list-style-type: none"> operate presentation equipment
Digital literacy skills to:	<ul style="list-style-type: none"> develop presentation materials using computer software

Unit Mapping Information

Code and Title Current Version	Code and Title Previous Version	Comments
VU23456 Present architectural designs	VU22467 Present architectural designs	Equivalent unit. Updated to meet revised Standards for Accredited Courses unit template.



Assessment Requirements Template	
Title	Assessment Requirements for VU23456 Present architectural designs
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"> • prepare and conduct at least two design presentations for building designs. <p>In completing the above there must also be evidence that the learner has:</p> <ul style="list-style-type: none"> • liaised with relevant stakeholders in the planning and development of the presentation and materials • clearly communicated concepts and outcomes through appropriate graphics, verbal and written communication • engaged effectively with the audience.
Knowledge Evidence	<p>The learner must be able to apply essential knowledge required to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the work role. This includes knowledge of:</p> <ul style="list-style-type: none"> • production of industry standard drawings, including: <ul style="list-style-type: none"> • plans, sections and other orthographic projection • perspective drawings • basic digital modelling and material representation • industry standard software to produce graphic and written presentations • effective presentation methods to communicate building design concepts.
Assessment Conditions	<p>Skills in this unit must be demonstrated in a building design workplace or an environment that simulates workplace conditions.</p> <p>This includes access to:</p> <ul style="list-style-type: none"> • relevant specifications and work instructions • computer hardware and software to enable the production of digital images • electronic equipment required for the presentation of design concept. <p>Assessor requirements</p> <p>No specialist vocational competency requirements for assessors apply to this unit.</p>

Unit code	VU23457
Unit title	Manage architectural project administration
Application	<p>This unit describes the performance outcomes, skills and knowledge required to manage the development and administration of the building project documentation.</p> <p>It requires the ability to apply the relevant legislation relating to project administration and to comply with the organisational requirements for quality assurance.</p> <p>This unit applies to building designers who manage the documentation and administration requirements for building projects within the legal responsibilities of building designers.</p> <p>No occupational licensing or legislative requirements apply to this unit at the time of publication. However, this unit forms part of a minimum qualification requirement for the registration class of Draftsperson, Building Design (Architectural) category, with the Victorian Building Authority.</p>
Pre-requisite Unit(s)	N/A
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	Determine building documentation requirements	1.1	Develop schedule of drawings required for approval stages and items to be included in the contract documentation.
		1.2	Determine process and order of precedence for contract documentation development and associated legal responsibilities.
		1.3	Review main forms of contracts, their essential components, the process of contract enforcement and means for dispute resolution.
		1.4	Determine conditions under which the contract can be deemed valid or invalid.
		1.5	Identify workplace policies and systems for recording, storage and retrieval of information and processes for privacy and security.
2	Determine requirements for approval submission	2.1	Research planning scheme provisions to determine state and local planning policies, zones and overlays and other

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			provisions affecting land use and development.
		2.2	Identify and review types of planning permit and additional approvals according to the requirements of the planning scheme.
		2.3	Identify required documentation for planning approval submission according to local council specifications.
		2.4	Determine stages of approval process according to project requirements and record for inclusion in project management schedule.
3	Complete a standard building contract	3.1	Identify statutory authorities connected to the project and obtain required information.
		3.2	Identify quality assurance standards and procedures which may impact on building projects and contracts.
		3.3	Identify and access the standard building contract template according to legislative requirements.
		3.4	Check standard contract contains accurate information and complies with relevant legislation and organisational quality assurance procedures.
		3.5	Calculate basic cost indicators for the building project and prepare invoices according to organisational procedures.
4	Determine requirements for copyright compliance	4.1	Identify legal principles for copyright and the implications for designers.
		4.2	Identify organisational procedures for copyright and protection against plagiarism and compliance requirements for documentation.
5	Determine requirements for Competition and Consumer Act	5.1	Investigate the provisions of the Competition and Consumer Act that impact on design drafting practices.
		5.2	Identify and apply the relevant organisational procedures to ensure compliance with legislation.
6	Complete a standard specification	6.1	Identify standard types of specifications and the limitations to the building project.
		6.2	Select specification to suit building project in consultation with relevant parties and customise as necessary.
		6.3	Compile the information and documents required for the building project specification.
		6.4	Customise a standard specification to complete the building project specification.
7	Complete design and documentation management schedule	7.1	Identify parameters, milestones and benchmarks associated with the building project.

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	7.2	Analyse project constraints and determine strategies for their management.
	7.3	Produce schedule showing project milestones and approval stages.

Range of Conditions

N/A

Foundation Skills

Foundation Skills describe the language, literacy, numeracy and employability skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Reading skills to:	<ul style="list-style-type: none"> interpret key information from relevant legislation, planning permit application requirements and other relevant documentation
Writing skills to:	<ul style="list-style-type: none"> prepare project documentation using clear language and industry terminology
Oral communication skills to:	<ul style="list-style-type: none"> using questioning and clear language to identify and confirm requirements
Numeracy skills to:	<ul style="list-style-type: none"> calculate basic cost indicators
Self-management skills to:	<ul style="list-style-type: none"> coordinate responsibilities and meet project timelines
Digital literacy skills to:	<ul style="list-style-type: none"> use project management software in managing architectural project administration

Unit Mapping Information

Code and Title Current Version	Code and Title Previous Version	Comments
VU23457 Manage architectural project administration	VU22468 Manage architectural project administration	Equivalent unit. Updated to meet revised Standards for Accredited Courses unit template.



Assessment Requirements Template	
Title	Assessment Requirements for VU23457 Manage architectural project administration
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"> • manage the aspects of administration for at least one architectural project <p>In completing the above there must also be evidence that the learner has:</p> <ul style="list-style-type: none"> • determined the requirements for contract legislation, standard architectural and building contracts, contract documentation processes and legal implications for all parties and liability • complied with copyright and competition legislation • complied with consumer legislation • completed a standard contract and specifications associated with the architectural project • completed a project management schedule for the project.
Knowledge Evidence	<p>The learner must be able to apply essential knowledge required to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the work role. This includes knowledge of:</p> <ul style="list-style-type: none"> • common terminology, definitions, methods, process and procedures used in relation to a design drafting office • relevant legislation and how it relates to architectural services and the building industry • organisational quality assurance standards and procedures related to managing architectural project administration. • legal liabilities of parties involved in the execution of a building project • basic cost indicators for a building project • standard building contracts and their essential components • contract documentation process, including order of precedence and relationships between the documents. • legal liabilities of each party within the terms of the contract conditions under which a contract can be deemed valid or invalid. • agencies and the means available in the process of contract enforcement • means for the resolution of disputes • principles of project management, including project constraints • use and implication of specification notes on drawings • file transmittal, revision and management of project file • use of project management software.
Assessment Conditions	<p>Skills in this unit must be demonstrated in a building design workplace or an environment that simulates workplace conditions.</p> <p>This includes access to:</p> <ul style="list-style-type: none"> • local council planning guidelines • other relevant legislation that applies to architectural services

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- documentation, including quality assurance standards and procedures and standard contract templates
 - project management software.

Assessor requirements

No specialist vocational competency requirements for assessors apply to this unit.

Unit code	VU23458
Unit title	Undertake complex architectural projects
Application	<p>This unit describes the performance outcomes, skills and knowledge required to undertake complex architectural projects for commercial (National Construction Code (NCC Classes 2 to 9 Type A and B) buildings.</p> <p>It requires the ability to consult with clients to prepare project briefs, develop and present design concepts and documentation that meets the brief and relevant national and Victorian regulatory frameworks and local council guidelines. It includes developing critical path management diagrams.</p> <p>This unit applies to building designers who complete complex architectural projects according to client and relevant legislative requirements and within the legal responsibilities of building designers.</p> <p>No occupational licensing or legislative requirements apply to this unit at the time of publication. However, this unit forms part of a minimum qualification requirement for the registration class of Draftsperson, Building Design (Architectural) category, with the Victorian Building Authority.</p>
Pre-requisite Unit(s)	N/A
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	Determine requirements for the project	1.1	Confirm details of the building design with client to develop the project brief.
		1.2	Conduct preliminary analysis of planning and local authority regulations to determine requirements.
		1.3	Conduct feasibility study to determine the viability of the project.
		1.4	Undertake a detailed site analysis and survey and prepare the planning permit application.
		1.5	Evaluate draft brief against client requirements and submit to client for confirmation or amendments.
2	Develop design concept	2.1	Develop design response, models and presentation drawings according to project brief.

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		2.2	Present the design concept to the client.
		2.3	Obtain approval for the final design to finalise client contract.
3	Finalise design	3.1	Review approved design concept against the budget and produce documentation to communicate the design.
		3.2	Select a preliminary range of materials and finishes according to project brief.
		3.3	Prepare planning application documents for lodgement.
		3.4	Undertake consultation with local authorities, and other interested parties, as required.
		3.5	Coordinate design work to be undertaken by secondary consultants as required.
		3.6	Develop or obtain design concepts and required documentation for internal spaces and finishes.
4	Prepare and coordinate documentation	4.1	Prepare documents for the project to be tendered according to workplace procedures.
		4.2	Provide details of specifications into documentation as required.
		4.3	Prepare or facilitate joinery, internal spaces and electrical documents for inclusion into contract set.
		4.4	Prepare or facilitate drainage and landscape documents for inclusion into contract set.
		4.5	Coordinate and integrate work from specialist consultants into architectural documentation.
		4.6	Prepare or facilitate opinion of probable cost.
		4.7	Check completed documents and submit for building approval.
5	Prepare a critical path management diagram	5.1	Determine suitable methods for tendering and building contract according to project brief.
		5.2	Determine requirements for project supervision to ensure design intent and specifications comply with contract documents and project schedule.
		5.3	Confirm a critical path management diagram with relevant stakeholders for all stages in construction process.
		5.4	Identify stages for the implementation of progress claims, claims for extensions of time and issuing of progress certificates according to the project schedule.

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	5.5	Identify timeframes for the preparation of defect notices and certificates for practical completion and final completion are identified according to the project schedule.
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Range of Conditions

N/A

Foundation Skills

Foundation Skills describe the language, literacy, numeracy and employability skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Reading skills to:	<ul style="list-style-type: none"> interpret key information from complex text that includes legislation, regulations, codes and standards
Writing skills to:	<ul style="list-style-type: none"> prepare detailed documentation using logical structure, clear language and industry terminology
Oral communication skills to:	<ul style="list-style-type: none"> using questioning to identify and confirm requirements present information using language and concepts appropriate to industry conventions
Numeracy skills to:	<ul style="list-style-type: none"> apply measurements and calculations to building designs
Digital literacy skills to:	<ul style="list-style-type: none"> develop presentation materials and contract documentation using industry standard computer software

Unit Mapping Information

Code and Title Current Version	Code and Title Previous Version	Comments
VU23458 Undertake complex architectural projects	VU22469 Undertake complex architectural projects	Equivalent unit. Updated to meet revised Standards for Accredited Courses unit template.



Assessment Requirements Template

<p>Title</p> <p>Performance Evidence</p>	<p>Assessment Requirements for VU23458 Undertake complex architectural projects</p> <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"> develop a design solution and supporting documentation for a commercial building (NCC Classes 2 to 9 Type A or B) building. <p>In completing the above, there must also be evidence that the learner has:</p> <ul style="list-style-type: none"> complied with legislative requirements for the building design and documentation of the building complied with the workplace processes for project administration. developed a critical path management diagram according to the project schedule.
<p>Knowledge Evidence</p>	<p>The learner must be able to apply essential knowledge required to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the work role. This includes knowledge of:</p> <ul style="list-style-type: none"> national regulatory framework, including the National Construction Code (NCC) and Australian standards, Victorian regulatory framework and local council guidelines relevant to the design and administration of architectural projects purpose and process for detailed site analysis workplace procedures and documentation requirements for developing design concepts, construction documentation and building project administration software used in the production of presentation and design and documentation process for developing a critical path management diagram.
<p>Assessment Conditions</p>	<p>Skills in this unit must be demonstrated in a building design workplace or an environment that simulates workplace conditions.</p> <p>This includes access to:</p> <ul style="list-style-type: none"> national regulatory framework, including the NCC and Australian Standards Victorian regulatory framework local council planning guidelines appropriate support materials research resources, including industry-related information. <p>Assessor requirements</p> <p>No specialist vocational competency requirements for assessors apply to this unit.</p>

Unit code	VU23459
Unit title	Conduct, interpret and apply a Bushfire Attack Level (BAL) assessment
Application	<p>This unit describes the performance outcomes, skills and knowledge required to conduct, interpret and apply Bushfire Attack Level (BAL) assessments to the design and construction of buildings.</p> <p>It includes the ability to apply theoretical knowledge of fire and the national and Victorian regulatory frameworks to assess a location and consult with clients about the benefits of achieving the required fire resistance. It includes applying a methodical, stepped process to determine and assess the bushfire risk of the site and the determination of the BAL using Method 1 (the simplified bushfire risk method from AS 3959).</p> <p>This unit applies to building designers who conduct and apply the outcome of a BAL assessment to building design, material selection and construction methods so that buildings better withstand the effects of a bushfire and provide greater protection for occupants and buildings.</p> <p>No occupational licensing or legislative requirements apply to this unit at the time of publication. However, this unit forms part of a minimum qualification requirement for the registration class of Draftsperson, Building Design (Architectural) category, with the Victorian Building Authority.</p>
Pre-requisite Unit(s)	N/A
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	Analyse cause and effect of bushfires	1.1	Identify BAL assessment requirements in relation to occupational health and safety (OHS)/work health and safety (WHS), legislative, workplace and certification requirements.
		1.2	Analyse bushfire behaviour to determine potential impact on building and the environment in bushfire-prone areas.
		1.3	Analyse the impact of topography and weather conditions to determine the risk of bushfires occurring and potential impact on human life and protection of building.
		1.4	Identify sources of combustion to determine how they



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			influence bushfires.
		1.5	Consult with stakeholders to identify benefits of undertaking a BAL assessment.
		1.6	Review responsibilities of local, state and national authorities to determine their role in minimising the impact of bushfires.
2	Correlate information about site conditions	2.1	Review objectives of legislation and standards covering buildings in bushfire-prone areas.
		2.2	Identify site location to determine the Fire Danger Index (FDI) for the site.
		2.3	Identify site vegetation classification, vegetation type and exclusions to determine potential contribution to supporting fire progress.
		2.4	Measure the distance of vegetation from buildings to determine the level of bushfire risk to the site.
		2.5	Measure the slope of the land under the classified vegetation to determine the direct influence on the severity of a bushfire.
3	Determine the BAL for site	3.1	Use the FDI, vegetation classification and type, distance of vegetation and slope to select the BAL relevant to the site.
		3.2	Check the BAL assessment of the site for accuracy.
		3.3	Communicate the limitations and benefits of the BAL assessment to client.
		3.4	Document and report details of the BAL assessment according to workplace requirements.
4	Interpret relevant bushfire information	4.1	Identify requirements for a BAL assessment application in a bushfire-prone area and in a Bushfire Management Overlay (BMO) according to design and construction process.
		4.2	Interpret standard definitions associated with bushfires in the context of building design.
		4.3	Determine purpose of applying a BAL assessment to inform design decisions.
		4.4	Analyse effects of bushfires on humans and buildings as they relate to each BAL.
		4.5	Analyse risks associated with each BAL to determine impact on building design, materials and construction methods.

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5	Integrate bushfire protection requirements into building design and construction	5.1	Analyse building designs and individual design features to determine their resistance to bushfire and reduce the level of risk to occupants.
		5.2	Analyse features and benefits of materials to determine their suitability for the BAL assessment.
		5.3	Incorporate BAL assessment outcomes and the Australian Standards into the design and construction requirements for buildings in bushfire-prone areas.

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Range of Conditions

N/A

Foundation Skills

Foundation Skills describe the language, literacy, numeracy and employability skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Reading skills to:	<ul style="list-style-type: none"> interpret key information from legislation, specifications and procedures for undertaking and applying BAL assessments
Writing skills to:	<ul style="list-style-type: none"> document outcomes of BAL assessment using clear language and terminology and in the required format
Oral communication skills to:	<ul style="list-style-type: none"> using questioning to identify and confirm requirements share information using language and concepts appropriate to industry conventions

Unit Mapping Information

Code and Title Current Version	Code and Title Previous Version	Comments
VU23459 Conduct, interpret and apply a Bushfire Attack Level (BAL) assessment	VU22470 Conduct, interpret and apply a Bushfire Attack Level (BAL) assessment	Equivalent unit. Updated to meet revised Standards for Accredited Courses unit template.

Assessment Requirements Template

<p>Title</p> <p>Performance Evidence</p>	<p>Assessment Requirements for VU23459 Conduct, interpret and apply a Bushfire Attack Level (BAL) assessment</p> <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"> undertake at least two separate BAL assessments on two different vegetation classifications and site slopes to determine the level of bushfire risk. <p>In completing the above there must also be evidence that the learner has:</p> <ul style="list-style-type: none"> complied with the relevant legislative and regulatory requirements, including OHS/WHs and environmental and workplace policies and procedures when undertaking and applying a BAL assessment to the design and construction process communicated effectively and work safely with others incorporated the outcomes of one of the BAL assessments conducted into the design of at least one building.
<p>Knowledge Evidence</p>	<p>The learner must be able to apply essential knowledge required to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the work role. This includes knowledge of:</p> <ul style="list-style-type: none"> national regulatory framework, including the NCC and Australian Standards and Victorian regulatory framework relevant to conducting BAL assessment OHS/WHs and environmental protection regulatory and certification requirements relevant to evaluating fire potential and prevention workplace policies and procedures for undertaking and applying a BAL assessment to the design and construction process bush fire behaviour, environmental risks and hazard prevention purpose and processes associated with undertaking a BAL assessment underlying principles for incorporating the outcomes from a BAL assessment into the design and construction process definitions associated with bushfires, including: <ul style="list-style-type: none"> BAL FDI Fire Resistance Level (FRL) Flame Zone (FZ) distance of vegetation slope vegetation classification and type vegetation exclusions procedures for recording, reporting and maintaining workplace records and information mathematical procedures for estimation and measurement.

**Assessment
Conditions**

Skills in this unit must be demonstrated on real bushfire prone area sites that have vegetation and slopes. The environments cannot be simulated.

This includes access to:

- national regulatory framework, including the NCC and Australian Standards
- Victorian regulatory framework
- OHS/WHS and environmental regulations and guidelines
- relevant specifications, documentation and workplace instructions
- resources, materials and equipment required to conduct BAL assessments.

Assessor requirements

No specialist vocational competency requirements for assessors apply to this unit.

