



Australian Government

CPPBDN4103 Use CAD software to produce drawings for building design projects

Release: 1

CPPBDN4103 Use CAD software to produce drawings for building design projects

Modification History

Release 1 This version first released with CPP Property Services Training Package Release 11.0.

Supersedes and is equivalent to CPPBDN5017A Produce 2-D drawings for building design projects using CAD software. Title changed to clarify unit outcome. Updated to meet the Standards for Training Packages 2012.

Application

This unit specifies the skills and knowledge required to produce drawings that conform to Australian Standards and drawing protocols for building design projects, using computer-aided design (CAD) software. It includes preparing building design drawings from instructions, sketches and drawings for building design projects.

The unit applies to drafters who work under the supervision and instruction of building designers or architects, and use specialised knowledge to complete routine and non-routine tasks and deal with predictable and sometimes unpredictable drafting problems

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Building Design

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe what needs to be done to demonstrate achievement of the element.

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| 1 Create drawing template files applicable to CAD software utilised. | 1.1 Set up basic drawing environment to meet the requirements of selected CAD software. |
| | 1.2 Create necessary layering strategy to meet standard drawing requirements. |

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| | 1.3 | Create architectural library to meet standard drawing requirements. |
| | 1.4 | Create text and dimension styles to meet standard drawing requirements. |
| | 1.5 | Create line types of different thicknesses to meet standard drawing requirements. |
| | 1.6 | Utilise hatch patterns and types to meet standard drawing requirements. |
| | 1.7 | Set up title blocks for different drawing sizes. |
| | 1.8 | Set up schedules according to workplace requirements. |
| 2 | Create CAD drawings. | |
| | 2.1 | Use CAD software program and functions to produce required drawings. |
| | 2.2 | Add notations to drawings and check to ensure compliance with Australian standards and drawing protocols. |
| | 2.3 | Add dimensions to drawings as required and apply scales according to Australian standards and drawing protocols. |
| 3 | Import files for CAD software. | |
| | 3.1 | Identify software requirements for importing digital text and drawing files and confirm compatibility. |
| | 3.2 | Import digital text and drawing files into CAD drawings. |
| | 3.3 | Insert external drawing files into CAD drawings. |
| 4 | Edit drawing components. | |
| | 4.1 | Identify elements that are not required and purge from drawings. |
| | 4.2 | Use editing commands to modify drawing elements and text. |
| 5 | Save and back up files. | |
| | 5.1 | Create suitable file directories for drawing project. |
| | 5.2 | Save drawing files for later retrieval and back up |

according to workplace requirements.

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| 6 Print and export drawing files. | 6.1 Set page layout for drawing file to suit printing requirements. |
| | 6.2 Set print parameters for printer. |
| | 6.3 Export and send drawing files to relevant persons for use in different software applications. |
| | 6.4 Create portable document format files for relevant personnel to view completed drawings without using CAD software. |

Foundation Skills

As well as the foundation skills explicit in the performance criteria of this unit, candidates require:

- reading skills to interpret key requirements of documentation, plans, drawings and specifications
- numeracy skills to apply measurements and make calculations relating to scales and ratios in drawings.

Unit Mapping Information

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Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6f3f9672-30e8-4835-b348-205dfcf13d9b>

Assessment Requirements for CPPBDN4103 Use CAD software to produce drawings for building design projects

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Performance Evidence

To demonstrate competency, a candidate must meet the performance criteria of this unit by using computer-aided design (CAD) software according to manufacturers' specifications and workplace standards to produce five different types of building design drawings selected from the following:

- bracing plans
- electrical power and lighting plans
- floor framing plans
- floor plans
- elevations
- sections
- construction details
- roof drainage plans
- roof framing plans
- site plans
- slab or footing layout plans
- stormwater and sewerage layout plans.

Knowledge Evidence

To be competent in this unit, a candidate must demonstrate knowledge of:

- construction terminology used in building design projects
- functions and operation of CAD software used to produce drawings for building design projects
- digital file management procedures associated with drawings produced using CAD software
- relevant industry standards and codes of practice for producing drawings for building design projects
- types and uses of architectural drawings

- building materials, construction methods and their representation in drawings produced using CAD software
- drafting and drawing protocols:
 - abbreviations
 - commonly used symbols
 - dimensioning
 - drawing titles
 - hatched regions
 - legends
 - lettering standards
 - line types
 - numbering
 - paper size
 - scale
 - schedules
 - standard units of measurement.

Assessment Conditions

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations. Competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting where these skills and knowledge would be performed. This includes access to:

- computers with CAD and portable document format software
- industry standards and building codes for producing required drawings.

Links

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