

Unit of Competency CPCPCM4013

Produce 2-D architectural drawings using design software

Application

This unit specifies the skills and knowledge required to produce two-dimensional (2-D) architectural drawings using computer-aided design (CAD) software. It includes preparing drawings from project briefs, sketches, drawings and plans for residential and commercial projects.

This unit applies to those who work are responsible for preparing architectural drawings.

This unit is suitable for people operating with some autonomy. A person working at this level would be expected to take responsibility for organising and completing tasks assigned to them without needing close supervision.

In some jurisdictions, this unit of competency may form part of accreditation, licensing, legislative, regulatory or certification requirements.

Prerequisite Unit

Nil.

Elements and Performance Criteria

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|------------------------------------|---|
| 1. Create a drawing template file. | 1.1 Confirm and clarify drawing requirements with relevant personnel. 1.2 Access and refer to current building and plumbing standards and regulations. 1.3 Set up a basic drawing environment. 1.4 Create a layering strategy for drawing, viewing and editing. 1.5 Create an architectural library. 1.6 Create suitable styles for title block, hatch patterns, dimension lines and thicknesses and text. |
| 2. Produce architectural drawings. | 2.1 Produce drawings using appropriate layers. 2.2 Add relevant notations to the drawing as required. 2.3 Add dimensions, using appropriate scales, to the drawing. 2.4 Use editing commands to modify drawing elements and existing text. 2.5 Delete elements that are not required from the existing drawing. |
| 3. Print CAD drawings. | 3.1 Set printing requirements to suit page layout for drawings. 3.2 Set print parameters for printer. 3.3 Print drawings on the correct media. 3.4 Observe sustainability principles and concepts when preparing for and undertaking work process. |
| 4. Save and back up files. | 4.1 Create suitable directories for the drawing project. 4.2 Save and back up drawing files into specific drives or directories. 4.3 Retrieve, rename and edit saved files as required. |
| 5. Import files. | 5.1 Insert drawing files into other software applications. 5.2 Import text files from other software application into CAD. |

Foundation skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes and is equivalent to CPCPCM4013A Produce 2-D architectural drawings using CAD software.

Links

Companion Volume Implementation Guide:

<https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

Assessment Requirements for CPCPCM4013

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Performance Evidence

To demonstrate competency, a candidate must meet the performance criteria for this unit by:

- producing one 2-D architectural drawing of a plumbing and services layout for a single dwelling (Class 1a) building, including:
 - the use of a computer-aided design (CAD) architectural program
 - compliance with current standards and codes
 - develop accompanying specifications.

Knowledge Evidence

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

- types and application of drawings, including:
 - elevations or projections
 - floor plans
 - site plans
 - sections
 - details
- drafting and drawing protocols/conventions, including:
 - abbreviations
 - commonly used symbols
 - legends / keys
 - lettering standards
 - scale
 - SI units of measurement
 - paper size
- current building and plumbing codes, standards and regulations
- construction terminology
- structural systems and construction technology
- characteristics and application of building and plumbing materials
- sustainability principles and concepts which cover:
 - social, economic and environmental use of resources to meet current and future needs
 - energy efficiency
 - disposing of waste material to ensure minimum environment impact
- relevant work health and safety (WHS) principles and responsibilities.

Assessment Conditions

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations.

This unit must be assessed in the workplace or a close simulation using realistic workplace conditions, materials, activities, responsibilities, procedures, safety requirements and environmental considerations.

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