

Draft 0.1

This is a draft update to CPPSIS6022 Produce mine drawings:

<https://training.gov.au/Training/Details/CPPSIS6022> Produce mine drawings.

Code changed to CPPSUR6022.

Changed PCs to active voice.

Changed 'person' to 'candidate' in PE for consistency.

Range of Conditions added to Knowledge Evidence.

I've added mapping info.

TAG will need to reassess this as unit is redeveloped.

Unit of Competency

CPPSUR6022 Produce mine drawings

Modification history

Release	Comments
1	Replaces superseded equivalent CPPSIS6022A Create mine drawings. This version first released with CPP Property Services Training Package Version 3.
	Replaces superseded equivalent CPPSIS6022 Produce mine drawings

Application

This unit specifies the skills and knowledge required to use high-level design software program functions and features to produce mine drawings. The unit covers preparing the drawing environment by analysing project specifications; and setting up hardware, software, menus and drawing defaults accordingly. It also covers designing and creating mine drawings; producing drawing files that are saved in various formats; measuring and calculating mine volumes; and checking and validating the results to identify and resolve errors. The unit requires the ability to link drawing entities to database attributes and create and plot detailed views using various scales.

The unit supports those who work in a technical management role in a mining environment and take responsibility for liaising with clients and end users to meet project requirements.

Licensing, legislative, regulatory or certification requirements apply to this unit in some States where mining surveying must be undertaken under the supervision of a registered surveyor. Relevant state and territory regulatory authorities should be consulted to confirm those requirements.

Prerequisite Unit

None

Unit Sector

Surveying and spatial information services

Elements and Performance Criteria

1. Prepare drawing environment.	<ul style="list-style-type: none">1.1 Source and analyse project specifications and objectives, deliverables, constraints and identify and document principal work activities in consultation with appropriate persons.1.2 Set up and use hardware and software according to organisational requirements.1.3 Customise menus and drawing defaults to suit project specifications according to organisational requirements.1.4 Create survey database according to organisational requirements.
2. Create mine drawings.	<ul style="list-style-type: none">2.1 Create drawings for surface mine using available software drawing functions and features to meet project specifications.2.2 Design drawings to incorporate mines safety requirements according to project specifications and organisational requirements.2.3 Link drawing entities to database attributes to suit project specifications.2.4 Extract supplementary data from existing mining and engineering plans and drawings to meet project specifications.

	<p>2.5 Create detailed views using various scales to meet project specifications.</p> <p>2.6 Produce plots at required scale to meet project specifications.</p>
3. Produce output.	<p>3.1 Save files in various formats according to organisational requirements.</p> <p>3.2 Produce entities from drawing files or database and list in required format to meet project specifications.</p> <p>3.3 Measure or set out accurately identified spatial components and reduce data to project reference system.</p> <p>3.4 Calculate and validate mine volumes using captured data and measurements, and resolve errors or manage contingencies according to specifications and organisational requirements.</p>
4. Finalise drawings.	<p>4.1 Finalise and check drawings for compliance with project specifications and organisational requirements.</p> <p>4.2 Notify appropriate persons of results according to organisational requirements.</p> <p>4.3 Complete documentation and archive spatial data according to organisational requirements.</p>

Foundation Skills

Candidates require:

- initiative and enterprise skills to:
 - translate specifications into drawing design
- learning skills to:
 - extract and output information from engineering plans
- numeracy skills to:
 - apply understanding of height, depth, dimension and position to actual operational activity and virtual representation
 - use statistics to reduce errors in measurements
- oral communication skills to:
 - liaise with clients and end users to identify drawing detail
- reading skills to:
 - interpret technical drawing standards
- technology skills to:
 - export drawings into different formats
 - operate hardware, including computers and plotters.

Unit Mapping Information

Supersedes and is equivalent to CPPSIS6022 Produce mine drawings

Links

Companion Volume Implementation Guide:

<https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=6f3f9672-30e8-4835-b348-205dfcf13d9b>

Assessment Requirements for CPPSUR6022 Produce mine drawings

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Performance Evidence

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

- using a range of design software program functions and features to produce mine drawings that meet technical specifications for two different projects.

While producing the above mine drawings, the candidate must:

- define and document project objectives, constraints and main work activities
- prepare the drawing environment by setting up hardware and software system and drawing defaults, and customising menus
- communicate clearly with clients and stakeholders to clarify drawing requirements and detail
- apply mathematical concepts and skills to a range of surveying-related problems
- comply with standard operating procedures, drawing standards and organisational requirements relating to:
 - completing records and reporting
 - drafting mine drawings
 - protocols for saving and formatting drawing files
- create mine drawings that comply with design requirements, including:
 - data extracted from existing mining and engineering drawings
 - drawing entities linked to database attributes
 - incorporating mines safety requirements
 - producing drawings, views and plots at required scale
- exercise precision and accuracy in relation to measurements, tolerances and design
- save drawing files in formats relevant to software
- select and use appropriate equipment and software, as specified in the assessment conditions, to produce mine drawings.

Knowledge Evidence

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

- display principles in relation to mine drawings, including:
 - colour
 - composition
 - font type
 - legends
 - media
 - scale
 - size
 - text and line style

- drawing principles, capabilities and uses in relation to mine drawings
- industry-accepted drawing standards, data formats, and precision and accuracy requirements for preparing mine drawings using software
- methods for validating drawings and measurements to identify errors
- organisational, legal and statutory requirements relating to:
 - records and documentation
 - reporting
- standard engineering and mining plan design and presentation conventions
- techniques for incorporating surface mining methods and mines safety requirements into mine drawings
- appropriate persons:
 - client
 - colleague
 - end user
 - registered or qualified surveyor
 - site personnel
- drawing functions and features:
 - arcs
 - area and volumes functions
 - creating output files using designs or survey pick-up data
 - dimensions
 - drawing features, such as polylines and texts
 - drawing functions
 - edit functions
 - grade reports
 - isometrics and perspectives
 - macros
 - methods for drawing lines
 - ore and waste reports
 - two-dimensional (2-D) coordinate plotting.

Assessment Conditions

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

Assessment must be conducted in the workplace or a simulated workplace using realistic conditions, materials, activities, responsibilities, procedures, safety requirements and environmental considerations.

Candidates must have access to:

- equipment:
 - personal computer, including drawing applications and software appropriate for producing mine drawings
 - hardware, including printer, scanner, plotter and multimedia devices and peripherals
- specifications:
 - project and design specifications

- organisational policies, procedures and documentation relating to legal requirements for mines safety
- physical conditions:
 - access to equipped work station
- relationships with team members and supervisor:
 - working in a team
- relationships with client:
 - client consultation required.

Links

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