

**Draft 0.1**

This is a draft update to CPPSIS4030 Operate surveying equipment:

<https://training.gov.au/Training/Details/CPPSIS4030>.

Code changed to CPPSUR4030.

Changed PCs to active voice.

Changed 'person' to 'candidate' in PE.

Deleted: ' hand-held' and 'navigating and recording a traverse' from first dot point in PE

Reference to: 'two different projects' in first sentence of PE may be problematic at audit as no specific details provided

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

### CPPSUR4030 Operate surveying equipment

#### Modification history

Release	Comments
1	<del>Replaces superseded equivalent CPPSIS4030A Operate surveying equipment. This version first released with CPP Property Services Training Package Version 3.</del>
	Replaces superseded equivalent CPPSIS4030 Operate surveying equipment

#### Application

This unit specifies the skills and knowledge required to operate a range of surveying equipment for data capture or spatial data set-out. The unit covers selecting, setting up and using surveying equipment to perform basic measurements; and recording and calculating horizontal and vertical information. This includes validating and checking data accuracy and performing basic data reductions and manipulation using software. The unit requires the ability to check and adjust equipment to achieve task requirements, and to identify and report faults or problems. It also requires the ability to plan and execute work tasks in consultation with team members, and complete records and documentation.

The unit supports those who work in a surveying team in support positions relating to field data collection.

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

#### Prerequisite Unit

None

#### Unit Sector

Surveying and spatial information services

#### Elements and Performance Criteria

1. Plan surveying tasks.	<ul style="list-style-type: none"><li>1.1 Identify and clarify task requirements and principal work activities with appropriate persons.</li><li>1.2 Review design information to identify components to be measured in consultation with appropriate persons.</li><li>1.3 Select surveying equipment to meet task requirements, and set up according to manufacturer specifications.</li><li>1.4 Identify hazards, manage risks and report problems according to organisational requirements.</li></ul>
2. Execute surveying tasks.	<ul style="list-style-type: none"><li>2.1 Operate and adjust equipment as required to measure identified survey components according to task and organisational requirements.</li><li>2.2 Reduce and manipulate measured surveying data for comparison with design to meet task and organisational requirements.</li><li>2.3 Check data against task requirements, and identify and resolve errors in consultation with appropriate persons.</li><li>2.4 Validate and record measurements according to industry-accepted standards and organisational requirements.</li></ul>

	2.5 Perform team activities according to task and organisational requirements.
3. Finalise surveying tasks.	3.1 Finalise surveying task and process data according to task and organisational requirements. 3.2 Complete documentation and store data according to organisational requirements. 3.3 Check equipment, and report faults and problems according to manufacturer and organisational requirements. 3.4 Pack up and store equipment according to manufacturer and organisational requirements.

### Foundation Skills

Candidates require:

- numeracy skills to:
  - record and interpret statistics
  - solve basic problems relating to height, depth, dimension, direction and position
- oral communication skills to:
  - ask questions to clarify task requirements
- reading skills to:
  - interpret technical and diagrammatic information in task specifications and designs
- writing skills to:
  - record clear and accurate measurements, computations and field checks
- technology skills to:
  - operate equipment and software to manipulate basic spatial data.

### Unit Mapping Information

Supersedes and is equivalent to CPPSIS4030 Operate surveying equipment

### Links

Companion Volume Implementation Guide:

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

## Assessment Requirements for CPPSUR4030 Operate surveying equipment

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### Performance Evidence

To demonstrate competency, a candidate must meet the performance criteria of this unit by operating the following surveying equipment for spatial data capture or data set-out for two different surveying tasks:

- global positioning system (GPS) in single point positioning mode for:
  - determining point position
  - collecting designated attributes for designated features
- automatic, digital or laser level
- total station.

In addition, while capturing or setting out surveying data for the above surveying tasks, the candidate must use two of the following pieces of surveying equipment:

- compass
- clinometer
- data recording equipment
- digital or hard copy map or image
- distance measuring wheel
- hand-held laser measuring device
- tape.

While capturing or setting out the above spatial data, the person must:

- plan work activities to meet design and task specifications
- communicate clearly with others to clarify work tasks and report problems and errors relating to data or equipment
- accurately perform the following:
  - checks to validate measurements and identify potential faults and problems with equipment
  - data manipulations and reductions
  - measurements and computations that meet industry-accepted standards for accuracy, including calculating horizontal and vertical information
- comply with organisational, legislative and manufacturer requirements in order to work safely, including:
  - using personal protective equipment (PPE)
  - complying with relevant safe work method statements (SWMS)
  - identifying and managing hazards and risks
- cooperate with team members to operate equipment
- follow manufacturer specifications and standard operating procedures to correctly set up, operate, pack up and store surveying equipment and tools
- use organisational proformas to accurately record measurements and data.

## Knowledge Evidence

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

- accepted organisational standards for recording metadata
- attributes associated with a spatial dataset
- key features of spatial reference systems
- limitations of the surveying equipment specified in the performance evidence
- methods for downloading spatial data collected using the surveying equipment specified in the performance evidence
- methods for setting up, levelling, calibrating and using the surveying equipment specified in the performance evidence
- organisational policies and procedures relating to surveying data collection and set-out, and storage and retrieval of collected data
- organisational procedures for hazard reporting, and equipment use and maintenance
- surveying data acquisition methodologies using equipment specified in the performance evidence
- appropriate persons:
  - experienced site personnel
  - qualified surveyor
  - supervisor or line manager.

## 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:
  - as specified in the performance evidence
- specifications:
  - equipment operating manuals
  - standard operating procedures and documentation relating to work tasks
- relationships with team members and supervisor:
  - working in a team.

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