Australian Government

CPPSIS4031 Perform surveying computations

Release: 1

CPPSIS4031 Perform surveying computations

Modification History

Release 1.

This version first released with CPP Property Services Training Package Version 3.

Replaces superseded equivalent CPPSIS4031A Perform surveying computations.

Application

This unit of competency specifies the outcomes required to perform surveying computations in a plane coordinate system. Computations involve simple and complex figures with regular and irregular sides, and computations for traverses, angles, bearings, coordinates, perimeter and area. Computations include simple horizontal curves and horizontal set-out data for curves. Specialised software applications are routinely used.

The unit supports those who work in support positions in a surveying team to conduct surveying and mapping tasks.

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

Pre-requisite Unit

Nil

Unit Sector

Surveying and spatial information services

Elements and Performance Criteria

Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions.
1. Prepare for surveying computations.	1.1. Task requirements are identified in consultation with *appropriate persons*.
	1.2. Computational methods are identified according to industry and organisational procedures.
	1.3. Computational equipment is selected according to task and organisational requirements.

2.	Execute computation tasks.	2.1.	Computations are performed on coordinates of a simple closed traverse using computational equipment, and missing elements and coordinates are adjusted and computed.
		2.2.	Traverse information is reduced and adjustments are performed according to industry-accepted standards and task requirements.
		2.3.	Computations are performed on all elements of simple circular curves, and missing elements are solved according to standards and organisational requirements.
3.	Finalise computation tasks.	3.1.	Data and computations are checked to ensure accuracy according to standards and task requirements.
		3.2.	Computations are finalised and recorded according to organisational requirements.

Foundation Skills

This section describes the language, literacy, numeracy and employment skills essential to performance in this unit but not explicit in the performance criteria.

Skill	Performance feature
Numeracy skills to:	• apply the principles of algebra, geometry and trigonometry to the plane geometry and measuring figures with regular and irregular sides.
Oral communication skills to:	• ask questions to clarify task requirements and computational formulas • discuss solutions to computational problems.
Reading skills to:	• interpret computational data provided in diagrammatic form • interpret written computational tasks.
Writing skills to:	• record computations and results using industry-accepted templates and formats.

| Problem-solving skills to: | • | identify errors in computational results by applying rigorous checking procedures. |

Range of Conditions

This section specifies work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included. Bold italicised wording, if used in the performance criteria, is detailed below.

Appropriate persons must include at least one of the following:	• client
	• experienced surveying colleague
	• qualified surveyor
	• supervisor or line manager.

Unit Mapping Information

CPPSIS4031A Perform surveying computations

Links

Companion Volume implementation guides are found in VETNet - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6f3f9672-30e8-4835-b348-205dfcf13d9b