Australian Government

CPPSIS3020 Perform basic surveying computations

Release: 1

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Modification History

Release 1.

Replaces superseded equivalent CPPSIS3020A Perform basic surveying computations.

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

Application

This unit of competency specifies the outcomes required to perform basic surveying computations in a plane coordinate system. The unit covers computations and conversions based on basic mathematical concepts of algebra, geometry and trigonometry. Computations are done on simple regular geometric figures, traverses, angles, bearings, distances, plane coordinates, heights, perimeter and area.

The unit supports those who work under supervision in a surveying and spatial information services team to perform basic computations associated with field work and data collection.

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 basic surveying computations.	1.1. Computational requirements are identified in consultation with ***appropriate persons***.
		1.2. Computational procedures are identified according to industry and organisational requirements.
		1.3. Computational equipment is selected according to computational and organisational requirements.

2.	Calculate basic surveying data.	2.1. Computations are performed on angles and bearings according to computational requirements and using computational equipment.
		2.2. Conversions between polar and rectangular coordinates are performed according to computational requirements.
		2.3. Computations are performed on the coordinates of a simple closed traverse.
3.	Finalise work processes.	3.1. Computations and conversions are finalised and their accuracy confirmed according to computational requirements.
		3.2. Data is 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 basic concepts of algebra, geometry and trigonometry to plane geometry and measuring simple regular figures • perform calculations relating to geometric figures, area, angles, bearings, distances, traverses, plane coordinates, heights and perimeter.
Oral communication skills to:	• ask questions to clarify work task requirements and computational formulas • discuss computational methods.
Reading skills to:	• interpret computational data provided in diagrammatic form • interpret written computational tasks.
Writing skills to:	• record computations and results in line with industry requirements and in an appropriate format.

Problem-solving skills to:	• identify errors in computations.

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:	• experienced computational colleague • qualified surveyor • supervisor or line manager.

Unit Mapping Information

Links

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