



Australian Government

Assessment Requirements for CPPSIS5054 Perform geodetic surveying computations

Release: 1

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Modification History

Release 1.

Replaces superseded equivalent CPPSIS5054A Perform geodetic surveying computations.

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

Performance Evidence

A person demonstrating competency in this unit must satisfy the requirements of the elements, performance criteria, foundation skills and range of conditions of this unit. The person must also accurately perform geodetic surveying computations for two different surveying tasks.

While performing the above geodetic surveying computations, the person must:

- apply formulas to geodetic data and obtain correct results
- communicate clearly with others to clarify work tasks
- comply with organisational requirements and relevant standards essential to accuracy of:
 - calculating geodetic data
 - recording computations
- exercise precision and accuracy in geodetic computations
- perform calculations in a logical progression to solve geodetic surveying problems
- perform point to point calculations on:
 - projection plane
 - spheroid
- relate reference surfaces to geodetic components
- check accuracy of computations and resolve errors
- select and use the following computational equipment to perform geodetic surveying computations: scientific or programmable calculator or a software application that includes surveying calculations
- comply with organisational requirements relating to completing records and documentation.

Knowledge Evidence

A person demonstrating competency in this unit must demonstrate knowledge of:

- industry-accepted standards relating to accuracy and precision for geodetic surveying data
- common terms used in geodetic surveying calculations
- computing aids and software used to perform geodetic computations
- data reduction techniques

- industry-accepted methods for validating data to identify errors and discrepancies
- methods to perform projection plane computations relating to the following:
 - angle or bearing calculations on Map Grid of Australia (MGA)
 - arc to chord corrections
 - grid bearings
 - grid convergence
 - latitude and longitude to grid coordinates
 - point and line scale factor
 - point to point calculations
 - project zone calculations
 - transforming coordinate axes
 - using MGA and Geocentric Datum of Australia software
 - zone to zone transformations
- methods to perform reference surface computations relating to the following:
 - meridian convergence
 - point to point calculations
 - principle radii
 - spheroidal distance from observed distance.

Assessment Conditions

The following must be present and available to learners during assessment activities:

- equipment:
 - as specified in the performance evidence
- specifications:
 - task requirements
- relationships with team members and supervisor:
 - working in a team.

Timeframe:

- as specified by task and organisational requirements.

Assessor requirements

As a minimum, assessors must satisfy the assessor requirements in the Standards for Registered Training Organisations (RTOs) current at the time of assessment.

Links

Companion Volume implementation guides are found in VETNet -

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