



Australian Government

Assessment Requirements for CPPSSI5054 Perform geodetic surveying computations

Release: 1

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Modification History

Release 1 This version first released with CPP Property Services Training Package Release 12.0.

This unit supersedes and is equivalent to CPPSIS5054 Perform geodetic surveying computations.

Performance Evidence

To demonstrate competency a candidate must meet the elements and performance criteria of this unit by accurately using a scientific or programmable calculator or a software application to perform geodetic surveying computations at least three times for each of the following:

- distances using latitude and longitude
- bearing and distance using latitude and longitude
- conversion from geographic to grid coordinates
- transformation of coordinates.

Knowledge Evidence

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

- terms used in geodetic surveying calculations
- calculations relating to shape and size of the earth
- data reduction techniques
- logical progression of calculations to solve geodetic surveying problems
- methods to perform projection plane computations relating to:
 - 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 Map Grid of Australia and Geocentric Datum of Australia software
 - zone-to-zone transformations

- methods to perform reference surface computations relating to:
 - meridian convergence
 - point-to-point calculations
 - principal radii
 - spheroidal distance from observed distance
- industry-accepted methods for validating data to identify errors and discrepancies
- industry standards relating to geodetic surveying data.

Assessment Conditions

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

Competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting where these skills and knowledge would be performed.

Candidates must have access to:

- scientific or programmable calculator or a software application that includes surveying calculations.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6f3f9672-30e8-4835-b348-205dfcf13d9b>