

QUALIFICATION CODE CPP50120

QUALIFICATION TITLE Diploma of Surveying

QUALIFICATION DESCRIPTION

This qualification reflects the role of skilled surveying technicians who hold advanced surveying skills, and perform duties involving the performance of precise measurements and setting out structures using specialised surveying equipment.

Licensing, legislative, regulatory or certification requirements apply in every state. Cadastral surveying must be undertaken under the supervision of a registered surveyor. Relevant state and territory regulatory authorities should be consulted to confirm those requirements.

This qualification is suitable for an Australian traineeship pathway.

ENTRY REQUIREMENTS

Entry points which demonstrate a candidate's potential to undertake the CPP50120 Diploma of surveying are:

- CPP40216 Certificate IV in Surveying
- CPP40X20 Certificate IV in Surveying and Spatial Information Services
- Demonstrated relevant vocational experience, skills and knowledge commensurate with the scope of work covered in the core units of the CPP40X20 Certificate IV in Surveying and Spatial Information Services.

PACKAGING RULES

To achieve this qualification, competency must be demonstrated in 16 units of competency consisting of:

- 8 core units
- 8 elective units.

Electives are to be selected as follows:

- 8 units from the electives listed below, or
- 6 units from the electives listed below, plus 2 units which may be selected from any current training package provided they contribute to a valid, industry-supported vocational outcome, maintain the integrity of the AQF level of this qualification and do not duplicate the outcome of another unit used to achieve this qualification.

Core

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| CPPSSI5047 | Conduct GNSS surveys |
| CPPSSI5048 | Conduct engineering surveys |
| CPPSSI5053 | Perform complex surveying computations |
| CPPSSI5054 | Perform geodetic surveying computations |
| CPPSSI5057 | Conduct precision surveys |
| CPPSSI5058 | Conduct geodetic surveys |

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| CPPSSI5061 | Survey subsurface utility information (SUI) |
| CPPSSI5065 | Design basic engineering structures |
| Elective | |
| <u>AHCLPW404</u> | Produce maps for land management purposes |
| <u>BSBPMG522</u> | Undertake project work |
| CPPSSI5031 | Develop a spatial data collection plan |
| CPPSSI5032 | Capture new spatial data |
| CPPSSI5040 | Source, collate and interpret spatial data |
| CPPSSI5044 | Develop subdivision survey designs |
| CPPSSI5046 | Set out roads and stormwater systems |
| CPPSSI5050 | Produce survey drawings |
| CPPSSI5051 | Conduct an identification survey |
| CPPSSI5052 | Integrate surveying datasets |
| CPPSSI5060 | Develop spreadsheets for spatial data |
| CPPSSI5062 | Conduct photogrammetric mapping |
| CPPSSI5064 | Conduct complex spatial data analysis |
| CPPSSI6021 | Conduct open pit mine surveys |
| CPPSSI6022 | Produce mine drawings |
| CPPSSI6033 | Conduct underground mine surveys |
| CPPSSI6037 | Conduct advanced remote sensing analysis |
| <u>NWPHYS001</u> | Identify and analyse information technology for hydrographic surveys |
| <u>NWPHYS002</u> | Interpret and analyse science principles for hydrographic surveying |
| <u>NWPHYS003</u> | Manage and analyse water levels and flows |
| <u>NWPHYS004</u> | Manage hydrographic surveying projects |
| <u>NWPHYS005</u> | Use alternate positioning systems to gather data |
| <u>NWPHYS006</u> | Use remote sensing for hydrographic surveying |
| <u>NWPHYS007</u> | Use underwater acoustics to map waterways |
| MEM23004A | Apply technical mathematics |
| <u>PSPLND002</u> | Compile and check survey plans |

QUALIFICATION MAPPING INFORMATION

The CPP50220 Diploma of Surveying supersedes and is equivalent to the CPC50212 Diploma of Surveying.

LINKS

The Companion Volume Implementation Guide for the CPP Property Services Training Package is available at: <https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=6f3f9672-30e8-4835-b348-205dfcf13d9b>

Modification History

June 2020

CPPSIS4038 Prepare and present GIS data removed from electives as unit now proposed for deletion. It replicates what is addressed in other units.

New titles for 5044, 5046, 5050, 5051, 5053, 5061 and 5064 to better reflect unit outcomes.

May 2020

'Locate underground services in surveying practice' has been updated and retitled, *CPPSSI Survey subsurface utility information (SUI)*.

There is strong RTO feedback to move this unit from the core back to electives.

One feedback response to move *CPPSSI5054 Perform geodetic surveying computations* to electives as with the increase in GNSS we can see the benefit of Conduct a geodetic survey being core, but not these more antiquated computations. Not actioned in final draft.

Proposed to delete *CPPSIS5049 Plan and implement surveying projects*. Project management is addressed by the more coherent cross sector unit *BSBPMG522 Undertake project work*.

5053 Perform advanced surveying computations has been updated and retitled to *CPPSSI5053 Perform complex surveying computation*.

Based on strong feedback that it is not appropriate to include the hydrography units in the Advanced Diploma the units are included as electives in the Diploma of Surveying.

The rationale is that:

- the Australian Qualifications Framework (AQF) level for the Hydrography units aligns with AQF 5, a Diploma. The units currently sit within the [NWP50118 Diploma of Water Industry Operations](#).
- a Diploma aligns with specialist hydrography certification at Level 2, which is regarded as the technician level. The certifying body is the Australasian Hydrographic Surveyors Certification Panel (AHSCP). AHSCP provides a pathway for certification of hydrographic surveys to international standards. Further information is available at the SSSI website.

At the online consultation session held 30 April 2020, feedback was that the AVI drone related units proposed for inclusion were not suitable and should be removed-

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| AVIY0023 | Launch, control and recover remotely piloted aircraft |
| AVIY0031 | Apply principles of law to remote pilot aircraft systems operations |

Similarly, the big data cross sector units proposed for inclusion were removed:

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| BSBXBD401 | Capture and store big data |
| BSBXBD403 | Analyse big data. |

The use of drone technology is to be integrated into the relevant surveying and spatial information services units. Identification of the relevant units is underway.

Similarly, the management of big data is to be integrated into the relevant surveying and spatial information services units including:

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| CPPSIS5031 | Plan spatial data collection |
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| CPPSIS5032 | Capture new spatial data |
| CPPSIS5052 | Integrate surveying datasets. |

April 2020

Direct feedback obtained at the webinar/meeting held on 3 April 2020 was strong that the Advanced Diploma should not be deleted. Instead the additional electives in the Diploma should be included in the Advanced Diploma as specialisations were considered more appropriate at this level.

The Diploma of Surveying has now reverted to an earlier version with modifications. In response to feedback at the webinar:

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| CPPSIS5062 | Conduct photogrammetric mapping has been added to the electives. |
| CPPSIS5050A | Create engineering drawings was suggested to update and use as a CAD unit. |

Two units relevant to drones have been added to the electives:

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|--------------------------|---|
| AVIY0023 | Launch, control and recover remotely piloted aircraft |
| AVIY0031 | Apply principles of law to remote pilot aircraft systems operations |

Two units on big data have been added to the electives:

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|---------------------------|----------------------------|
| BSBXBD401 | Capture and store big data |
| BSBXBD403 | Analyse big data |

March 2020

At the TAG meeting 4 February 2020, it was proposed that the Advanced Diploma of Surveying be deleted and the relevant units from the Advanced Diploma be embedded in a redeveloped Diploma of Surveying. A revised Diploma of Surveying was developed that included mining units from the Advanced Diploma. In addition, units on hydrographic surveying from the NWP National Water Industry Training Package were added to the electives.

The units in the Diploma of Surveying have been listed alphanumerically and the packaging rules for adjusted which enabled specialisations in Land and Engineering, Mining and Hydrographic surveying. Recommended that CPPSIS5046 Set out stormwater systems be expanded to include roads.

November 2019

Entry requirements have been added.

Core units increased by 1, from 7 to 8 and the number of elective units reduced by 1, from 9 to 8. Total number of units remains the same.

CPPSIS5057 Conduct precision surveys has been moved from the electives to the core.

CPPSIS5061 Locate underground services has been moved from the electives to the core.

CPPSIS5031 Plan spatial data collection has been moved from the core to the electives.

CPPSIS6037 Conduct advanced remote sensing analysis moved from the Advanced Diploma electives to Diploma electives

Removed:

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| CPPCMN4002 | Implement and monitor environmentally sustainable work practices |
| CPPSIS4032 | Conduct field surveying operations - NB this was originally removed as it was in the core of the Certificate IV in Surveying. However, in the proposed structure |

of the Certificate IV, which combines Surveying and Spatial, the unit is the compulsory Group A – Surveying electives.

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| CPPSIS5037 | Maintain spatial data systems |
| CPPSIS5043 | Design spatial data storage systems |

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