

PROPOSED NEW QUALIFICATION

QUALIFICATION CODE

CPP40X20

QUALIFICATION TITLE

Certificate IV in Surveying and Spatial Information Services

QUALIFICATION DESCRIPTION

This qualification reflects the role of entry level technicians who work under supervision to assist a surveying or spatial information services team.

Survey technicians perform a range of duties using surveying tools and equipment, including Total Stations and global navigation satellite systems (GNSS), supported by data management skills.

Spatial information services technicians perform a range of duties using various geospatial technologies, including specialised geospatial software, mobile and web-based mapping and global navigation satellite system (GNSS), supported by data management skills.

No licensing, legislative, regulatory or certification requirements apply to this qualification at the time of publication.

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

There are no entry requirements for this qualification.

PACKAGING RULES

To achieve this qualification, competency must be demonstrated in 15 units of competency consisting of:

- 3 core units
- 12 elective units.

This qualification provides for a specialisation in either **surveying** or **spatial information services**. The RTO is to insert the specialisation on the testamur.

For a specialisation in **Surveying**, electives are to be selected as follows:

- a minimum of 6 units from Group A, and
 - 6 units selected from Group A, Group B and/or Group C, or
 - 4 units selected from Group A, Group B and/or Group C plus 2 units selected from any current training package or accredited course provided they contribute to a valid, industry-supported vocational outcome, maintain the AQF level of this qualification and do not duplicate the outcome of another unit used to achieve the qualification.

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For a specialisation in **Spatial and Information Services**, electives are to be selected as follows:

- a minimum of 6 units from Group B, and
 - 6 units selected from Group A, Group B and/or Group C, or
 - 4 units selected from Group A, Group B and/or Group C plus 2 units from any current training package or accredited course provided they contribute to a valid, industry-supported vocational outcome, maintain the AQF level of this qualification and do not duplicate the outcome of another unit used to achieve the qualification.

Core

CPPSSI3020	Perform simple surveying and spatial computations
CPPSSI4025	Collect spatial data using GNSS
CPPSSI4036	Operate spatial software applications

Elective

Group A: Surveying

CPPSSI3019	Produce basic plans of surveys
CPPSSI4030	Operate surveying equipment
CPPSSI4031	Perform surveying computations
CPPSSI4032	Plan and conduct field surveying operations
CPPSSI4037	Produce computer-aided drawings
CPPSSI4040	Collect spatial data using a Total Station
CPPSSI4041	Set out site and building works

Group B: Spatial Information Services

CPPSSI4022	Store and retrieve spatial data
CPPSSI4024	Source and assess spatial data
CPPSSI4026	Digitally enhance and process image data
CPPSSI4034	Maintain spatial data
CPPSSI4035	Apply GIS software to spatial data problems
CPPSSI4039	Design and produce maps
CPPSSI5035	Obtain and validate spatial data

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Group C – General

<u>AHCNAR307</u>	Read and interpret maps
<u>BSBSUS401</u>	Implement and monitor environmentally sustainable work practices
<u>BSBLDR403</u>	Lead team effectiveness
CPPSSI3011	Produce basic maps
CPPSSI5060	Develop spreadsheets for spatial data
CPPSSI5061	Survey subsurface utility information (SUI)
<u>ICTDBS403</u>	Create basic databases
<u>ICTDBS502</u>	Design a database
<u>ICTPRG402</u>	Apply query language
<u>ICTPRG405</u>	Automate processes
<u>ICTPRG407</u>	Write script for software applications
<u>ICTPRG414</u>	Apply introductory programming skills in another language
<u>MEM30012A</u>	Apply mathematical techniques in a manufacturing engineering or related environment
<u>PSPLND001</u>	Investigate tenure and land use history

QUALIFICATION MAPPING INFORMATION

The CPP40X20 Certificate IV in Surveying and Spatial Services supersedes and is equivalent to the CPP40216 Certificate IV in Surveying.

The CPP40X20 Certificate IV in Surveying and Spatial Services supersedes and is equivalent to The CPP40316 Certificate IV in Spatial Information Services.

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>

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Modification History

June 2020

CPPSSI4038 Prepare and present GIS data removed as feedback received recommended delete as it replicates content addressed in many other units.

May 2020

3020 'Perform basic surveying computations' has been updated and retitled *CPPSSI3020 Perform simple surveying and spatial computations* and moved to core from Elective Group A based on feedback received during online consultation 30 April 2020.

As there was significant overlap in the units, 4032 Conduct field surveying operations has been updated and the content from *CPPSIS4027 Organise surveying field services* embedded to create a retitled unit *CPPSSI4032 Plan and conduct field surveying operations*.

CPPSIS4027 Organise surveying field services is proposed for deletion.

Feedback received in relation to CORE units:

CPPSIS4022 Store and retrieve spatial data was initially proposed to be included in the core. Strong feedback was received during consultation to remove from the core as it is more aligned to GIS/Spatial and less relevant to a Surveying context.

CPPSI4038 Prepare and present GIS data initially proposed to be included in the core. Feedback received during consultation to remove from core, move to Elective Group B and to make up core unit numbers replace with AHCNAR307 Read and interpret maps. 4038 was moved to electives, but AHCNAR307 Read and interpret maps was not added to the core as it is an AQF 3 unit and there is already an AQF 3 unit in the core. And a reduced number of core units is within policy.

With the core adjusted, two spatial units are then moved to elective Group B and the units *CPPSIS5060 Develop spreadsheets for spatial data*, *CPPSIS5062 Conduct photogrammetric mapping and CPPSIS6040 Develop 2-D and 3-D terrain visualisations* (which were suggested to increase the elective choices for spatial) are not included.

April 2020

The model of the combined Certificate IV in Surveying and Spatial Information Services was supported by participants at the webinar/meeting held on Friday 3 April 2020.

CPPSIS5060 Develop spreadsheets for spatial data, *CPPSIS5062 Conduct photogrammetric mapping and CPPSIS6040 Develop 2-D and 3-D terrain visualisations* included in elective Group B to increase the spatial options available.

March 2020

There are three RTOS listed on training.gov.au with this qualification on scope: CIT, North Metro TAFE (WA) and TAFE NSW. However, only one, TAFE NSW is currently offering the qualification.

Further analysis of [NCVER enrolment data](#) was also undertaken.

	2018		2017		2016		2015		TOTAL	
	Enrol	Complete	Enrol	Complete	Enrol	Complete	Enrol	Complete	Enrol	Complete
Certificate IV in Surveying	331	120	313	153	302	145	314	148	1260	566

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Certificate IV in Spatial Information Services	78	38	80	29	85	10	123	10	366	87
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One of the COAG VET Reform policy directives is to remove qualifications that do not have strong demand. The Certificate IV in Spatial Information Services has relatively low enrolments nationally which show a decreasing trend – 50% over four years.

One way to maintain a more viable Spatial and Information Services outcome at the Certificate IV level would be to have a qualification model that combined both the Certificate IV in Surveying and the Certificate IV in Spatial Information Services. The packaging rules would use specialist elective groups and a surveying or spatial information services specialisation could be achieved and recognised on the testamur.

February 2020

At the TAG meeting 4 February 2020, the Certificate III in Surveying and Spatial Information Services was proposed to be deleted. A revised model for the draft Certificate IV was put forward. The packaging rules have been modified and the qualification includes three units from the Certificate III, which is proposed for deletion.

CPPSIS3020 Perform basic surveying computations is included in Group A electives

CPPSIS3011 Produce basic maps has been added to the Elective Group C

CPPSIS3019 Produce basic plans of surveys has been added to Elective Group A.

Imported units removed:

CUAACD301 Produce drawings to communicate ideas

ICTDBS502 Design a data base

ICTWEB401 Design a website to meet technical requirements

ICTWEB411 Produce basic client side script for dynamic web pages

ICTWEB429 Create a mark-up language document to specification

The ICT units are more suitable to web designers and programmers than surveyors or spatial people. Propose to replace [CPPCMN4003 Establish, develop and monitor teams](#) with [BSBLDR403 Lead team effectiveness](#).

Propose to replace [RIISTD201D Read and interpret maps](#) with AHCNAR307 Read and interpret maps.

November 2019

Propose to develop a new qualification by merging the CPP40216 Certificate IV in Surveying and CPP40316 Certificate IV in Spatial Information Services. The rationale is -

There are a significant number of units (11) which are common to both qualifications:

- 6 out of 8 units in the core AND 5 out of 9 electives in Surveying are also in Spatial.
- 3 out of 7 units in the core AND 8 out of 15 electives in Spatial are also in Surveying.

The packaging rules will enable a vocational outcome in either surveying or spatial information services.

Removed reference to mining from paragraph 5 in the description.

Propose to include a maths unit in the core.

Propose to replace *CPPCMN4002 Implement and monitor environmentally sustainable work practices* with cross sector *BSBSUS401 Implement and monitor environmentally sustainable work practices*. This minimises unit duplication in the system.

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Propose to replace CPPCMN4003 Establish, develop and monitor teams with BSBWOR502 Lead and manage team effectiveness. Outcomes are very similar and using the cross sector BSB unit addresses COAG priority to minimise duplication of units in the system. CPPCMN4003 is only used in Certificate IV Surveying and Spatial qualifications and Certificate IV in Cleaning Management.

As per working group advice removed ICTICT302 Install and optimise operating system software from electives.

DRAFT