Australian Government

RII50515 Diploma of Civil Construction Design

Release 3

RII50515 Diploma of Civil Construction Design

Modification History

Release	Comments
1	This qualification replaces RII50513 Diploma of Civil Construction Design. Amended packaging rules. Added new unit RIILAT402D Provide supervision in the leadership of diverse work teams to Group D electives. Updated coding on imported units. Added qualification mapping information.
2	This version was released with RII Resources and Infrastructure Training Package version 3.0.
3	This version includes minor changes from RII50515 Diploma of Civil Construction Design Version 2. Removed four deleted units of competency from Group B and replaced with three newly imported units of competency.

Qualification Description

The Diploma of Civil Construction Design reflects the role of personnel working as designers or design para-professionals who support professional engineers. They perform tasks involving a high level of autonomy and requiring the application of significant judgement in planning and determining the selection of equipment/roles/techniques for themselves and others. They are required to develop site specific work designs to ensure the implementation of the client's site requirements. They demonstrate the application of a broad range of technical, managerial, coordination and planning skills.

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

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

The following table provides the packaging rules for this qualification, followed by the list of relevant units of competency.

Total number of units = 20

20 elective units, of which:

- at least four (4) must be chosen from Group A
- at least two (2) must be chosen from Group B

- at least four (4) must be chosen from Group C
- at least four (4) must be chosen from Group D
- no more than three (3) units may be chosen from elsewhere within this training package, or from another endorsed training package, or from an accredited course.

All elective units selected from outside this qualification must reflect current occupational and learning outcomes of this AQF qualification level.

There are prerequisites to imported units listed in this qualification. Where a unit is imported as an elective care must be taken to ensure that all prerequisites specified are complied with.

Group A	
Unit code	***Unit title***
BSBCUS501	Manage quality customer service
BSBINM501	Manage an information or knowledge management system
BSBMGT608	Manage innovation and continuous improvement
BSBPMG512	Manage project time
BSBPMG513	Manage project quality
BSBPMG517	Manage project risk
BSBPMG518	Manage project procurement
BSBWOR501	Manage personal work priorities and professional development
BSBWOR502	Lead and manage team effectiveness
Group B	
Unit code	***Unit title***
MEM09011B	Apply basic engineering design concepts • Prerequisite unit: MEM09002B Interpret technical drawing
MEM30031A	Operate computer-aided design (CAD) system to produce basic drawing elements
MEM30033A	Use computer-aided design (CAD) to create and display 3-D models • Prerequisite unit: MEM30031A Operate computer-aided design (CAD) system to produce basic drawing elements
Group C	
Unit code	***Unit title***
RIICWD501D	Prepare detailed design of foundations

RIICWD502D	Prepare detailed design of lighting
RIICWD504D	Prepare detailed design of environmental controls
RIICWD505D	Prepare detailed design of landscaping
RIICWD506D	Prepare detailed design of canals
RIICWD507D	Prepare detailed geotechnical design
RIICWD508D	Prepare detailed design of rural roads
RIICWD509D	Prepare detailed design of urban roads
RIICWD510D	Prepare detailed design of busways
RIICWD511D	Prepare detailed design of sub-divisions
RIICWD512D	Prepare detailed design of motorways and interchanges
RIICWD513D	Prepare detailed design of rail civil infrastructure
RIICWD514D	Prepare detailed design of dams
RIICWD515D	Prepare detailed design of airfield civil works
RIICWD516D	Prepare detailed design of bicycle ways
RIICWD517D	Prepare detailed design of industrial hardstands
RIICWD518D	Prepare detailed design of open car parks
RIICWD519D	Prepare detailed design of inter modal facilities civil works
RIICWD520D	Prepare detailed design of rigid pavements
RIICWD521D	Prepare detailed design of flexible pavements
RIICWD522D	Prepare stabilised material mix design
RIICWD523D	Prepare asphalt mix design
RIICWD524D	Prepare design of spray seal surfacing
RIICWD525D	Select pavement surfacing
RIICWD526D	Prepare detailed traffic analysis
RIICWD527D	Prepare detailed design of traffic signals
RIICWD528D	Prepare detailed design of traffic management systems
RIICWD529D	Prepare detailed design of underground services

RIICWD530D	Prepare detailed design of surface drainage
RIICWD531D	Prepare detailed design of subsurface drainage
RIICWD532D	Prepare detailed design of tunnels
RIICWD533D	Prepare detailed design of civil concrete structures
RIICWD534D	Prepare detailed design of civil steel structures
RIICWD535D	Prepare detailed design of civil timber structures
RIICWD536D	Prepare detailed design of civil masonry, crib and gabion structures
RIICWD537D	Prepare detailed design of marine structures civil works
Group D	
Unit code	***Unit title***
CPPSIS5032	Capture new spatial data
CPPSIS5035	Obtain and validate existing spatial data
CPPSIS5036	Integrate spatial datasets
MSL925004	Analyse data and report results • Prerequisite unit: MSL924003 Process and interpret data

MSL975031	Supervise earthworks inspection, sampling and testing operations
	• Prerequisite units:
	  • MSL954004 Obtain representative samples in accordance with sampling plan
	  • MSL973021 Conduct field-based acceptance tests for construction materials

MSL975044	Perform complex tests to measure engineering properties of materials
	• Prerequisite units:
	  • MSL974026 Perform tests to determine the properties of construction materials
	  • MSL973022 Conduct laboratory -based acceptance tests for construction materials

RIICBS401D	Apply the principles for the asphalt paving and compaction
RIICBS402D	Apply the principles for the application of bituminous sprayed treatment
RIICBS403D	Apply the principles for the application of polymer modified binder
RIICBS404D	Apply the principles for the selection and use of bituminous emulsion
RIICBS405D	Apply the principles for the application of slurry surfacing
RIICBS406D	Apply the principles of pavement profiling using a profiler
RIICBS407D	Apply the principles for the manufacture and delivery of hot mix asphalt

RIICBS408D	Apply the principles for the manufacture of cold mix
RIICBS409D	Apply the principles for the manufacture of polymer modified binders
RIICBS410D	Apply the principles for the manufacture of bituminous emulsion
RIICBS411D	Apply the principles for the manufacture of slurry surfacing
RIICPL401D	Apply the principles for the installation of underground service using open excavation
RIICRC401D	Apply the principles of flexible pavement construction
RIICRC402D	Apply the principles of rigid pavement construction
RIICRC403D	Apply the principles of the stabilisation of materials
RIICRC404D	Inspect and report on pavement condition
RIICSG401D	Apply the principles of civil concrete structures construction
RIICSG402D	Apply the principles of civil steel structures construction
RIICSG403D	Apply the principles of civil timber structures construction
RIICSG404D	Apply the principles of civil masonry, crib and gabion structure construction
RIICTC401D	Apply the principles of tunnel construction
RIICTT401D	Apply the principles for the installation of underground services using trenchless technology
RIICTT402D	Apply the principles for the repair and rehabilitation of underground services using trenchless technology
RIILAT402D	Provide supervision in the leadership of diverse work teams
RIIMEX403D	Apply the principles of canal construction
RIIMPO402D	Apply the principles of earthworks construction

Qualification Mapping Information

Code and title current version	**Code and title previous version**	**Comments**	**Equivalence status**
RII50515 Diploma of Civil Construction Design	RII50513 Diploma of Civil Construction Design	Packaging rules changed to clarify intent; added one elective unit	Equivalent qualification

Links

Companion Volume implementation guides are found in VETNet - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272