



# Civil Construction - Structural Design, Model and Drafting skill set

State ID: GAB94

## About this course

This skill set is part of the RII50515 Diploma of Civil Construction Design, a nationally recognised qualification. Take your career in Building Information Modeling (BIM) to the next level with analytical and practical design skills based around construction industry standards and software tools.

Discover how to use tools like Revit BIM and Robot Structure analysis to construct and analyse CAD models to Australian design standards. Use your designs to develop detailed plans for workflow management and collaboration across disciplines.

Upon completion of the course a student will be able to demonstrate they have learned:

- Knowledge of structural requirements, local building and construction standards, codes and practices
- Structural mechanics: loads, analysis, materials, and design of members such as columns, beams, trusses and portal frames
- To model structural elements from basic beams, columns and walls through to more real-life complex examples in addition to exploring a variety of functions such as structural connections and advanced steel
- Simulating various load conditions to determine the strength and stiffness of structure by reporting component stress, strain and deformations
- Drafting, scheduling and the production of drawings and specifications for building project
- Use of BIM Revit Structural (Building Information Modelling) to compile building information ready for planning

and design and detailing for construction

This course consists of a weekly 3 hour workshop on campus, as well as an additional 6 to 8 hours a week of online study using our a Blackboard Learning Management System.

There are prerequisite requirements which are covered as recognition of prior learning (RPL)

## 2020 Dates

- Commencing February, Term 1, 2020
- Commencing July, Term 3, 2020
  - Every Monday 5pm to 8pm from 20 July to 7 December 2020

Cost non concession - \$1872.89

CPPBDN5013A Develop and collaborate on building information models for small-scale building design projects

MEM23004A Apply technical mathematics

MEM23109A Apply engineering mechanics principles

MEM30001A Use computer aided drafting systems to produce basic engineering drawings

MEM30002A Produce basic engineering graphics

Please note, the allocated three hours per week is only for the workshop and lectures and the remaining study has to be done using our LMS system i.e. Blackboard. Blackboard is where lecturers will populate their learning content, assignments and lesson plans. It is an expectation that students spend 6 to 8 hours of study time every week outside class hours/skillset.

## Overview

*This course may be offered with a blended, flexible delivery model to enable social distancing measures to be undertaken during the COVID-19 pandemic. This approach may include a mix of online and classroom based delivery, as well as practical and work experience placements. Lecturers will provide any specific instructions if your training delivery style needs to change.*

## All year round, 2021

---

### Munster - Part Time-Self Paced-On-campus

 When: **All year round**

 How: **Part Time**

## Units

---

### Core

National ID	Unit Title
CPPBDN5013A	Develop and collaborate on building information models for small-scale building design projects
MEM23004A	Apply technical mathematics
MEM23109A	Apply engineering mechanics principles
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

## Study pathway

Further study opportunities:

This short course is 1 of 3 evening skillsets offered. Completion of all 3 skillsets will achieve Diploma of Civil Construction Design qualification.