

ENGINEERING TECHNOLOGY

CIVIL ENGINEERING DESIGN PROGRAMS

The Advanced Diploma of Engineering Technology (Civil Engineering Design) is intended to provide participants with the following education outcomes:

- Apply engineering and scientific principles and knowledge to the analysis, design, and implementation of civil engineering solutions within a specialized technical field.
- Analyse, evaluate, and solve civil engineering problems using established engineering methods, standards, codes, and industry practices with initiative and judgement.
- Develop, interpret, and communicate technical information, engineering documentation, and design solutions for a range of civil engineering projects and professional contexts.
- Integrate, coordinate, and resolve technical issues across interconnected engineering systems through the application of systematic problem-solving approaches and digital engineering technologies.
- Provide specialized technical support in the planning, coordination, supervision, and management of civil engineering projects while addressing project constraints related to time, cost, quality, safety, and sustainability.
- Apply, adapt, and evaluate emerging engineering technologies, digital systems, and innovative industry practices to improve engineering outcomes and support continuous improvement.
- Demonstrate professional responsibility, independent judgement, and awareness of contemporary engineering developments, sustainability principles, ethical practices, and regulatory requirements relevant to the civil engineering industry.



APPLY NOW



CBD Campus

Modern facilities, computer labs, student lounges.



Student Support

Student lounge, student activities, In-house counsellor.



Nationality Mix

41 + Nationalities. Data from Feb 2025.



Capacity

1,040 Students.

ADVANCED DIPLOMA OF ENGINEERING TECHNOLOGY (CIVIL ENGINEERING DESIGN)

Code: 22700VIC

Cricos Code: 118246J

Course Duration: 104 weeks
(Including 14 weeks of Holidays)

Total Hours: 1800 hours

Material Fees: \$1,000*

Digital Access Fees: \$200**

Course Fee: \$34,000

*Students will be required to purchase additional resources at their own expense. Information regarding the estimated cost and where to obtain these resources will be provided in due course.

Industry Sector

Civil Construction
Engineering Design

Career Opportunities

Graduates of this qualification can pursue para-professional roles such as:

- Civil Draftsperson
- Engineering Laboratory Technician
- Research Assistant
- Civil Technician



NATIONALLY RECOGNISED
TRAINING

You will gain the knowledge, skills and training to support civil engineers in the civil and structural designing of infrastructure, construction and design industry.

VOCATIONAL OUTCOMES

- The Advanced Diploma of Engineering Technology (Civil Engineering Design) is intended to provide participants with the following vocational outcomes:
- 312211 Civil Engineering Design Draftsperson
- 312211 Road Design Draftsperson
- 312211 Structural Engineering Drafting Officer
- 312212 Civil Engineering Assistant
- 312212 Civil Laboratory Technician
- 312212 Geotechnical Laboratory

Technician Key duties, specialised skills, and practical responsibilities include:

- Preparing sketches, charts, tabulations, plans and designs for civil engineering works such as drainage,

- water supply, sewerage reticulation systems, roads, airports, dams, bridges and other structures.
- Performing and directing fieldwork and laboratory testing.
- Interpreting work assignment instructions, applying appropriate procedures and selecting equipment
- Collecting and analysing data, and carrying out computations.
- Estimating material costs and ensuring finished works are within specifications, regulations and contract provisions.
- Inspecting civil engineering works, and organising and supervising maintenance and repair work.
- Conducting field and laboratory tests of construction materials and soils, and collecting data for traffic surveys.

CORE UNITS

MEM13015	Work safely and effectively in manufacturing and engineering	
MEM16006	Organise and communicate information	MEM13015
MEM16008	Interact with computing technology	MEM13015 & MEM16006
MEM22001	Perform engineering activities	MEM16006
MEM22002	Manage self in an engineering environment	MEM16006
MEM23004	Apply technical mathematics	
MEM30007	Select common engineering materials	
MEM30031	Operate computer aided design (CAD) system to produce basic drawing elements	
VU23908	Investigate advanced technology applications in the manufacturing industry and related industries	
MEM22013	Coordinate engineering projects	MEM16006
MEM30033	Use computer - operated design (CAD) to create and display 3-D models	MEM30031

ELECTIVE UNITS

MEM23007	Apply calculus to engineering tasks	MEM23004
MEM23109	Apply Engineering Mechanics Principles	MEM23004
VU23948	Apply advanced statics principles to engineering problems	MEM23007 & MEM23109
VU23960	Apply environmental and heritage solutions to civil engineering projects	
VU23955	Apply principles of mechanics to engineering structures	
VU23963	Produce engineering design for a stormwater reticulation scheme	
VU23957	Produce engineering design for a reinforced concrete structure	
VU23959	Produce an engineering design for a steel structure	
VU23964	Produce advanced engineering drawings for a reinforced concrete structure	
VU23965	Produce advance engineering drawings for a steel structure	
VU23950	Apply surveying computations to civil engineering projects	
VU23958	Analyse and design foundations and footings	MEM23004
VU23962	Design timber structures	
VU23951	Produce Geometric Design for roads	
VU23961	Analyse the strength of civil structural elements	MEM23109
VU23956	Apply Principles of soil mechanics	MEM23004
VU23936	Produce drawings to enable road construction	
VU23930	Apply fundamentals of civil engineering to a construction project	
VU23932	Apply surveying for civil engineering projects	MEM23004A
VU23933	Perform measurements and layout task on construction site	
CPPBDN6106	AProduce building information modelling for building design projects	
CPPSSI4035	Apply GIS software to spatial problems	

HOW WE TEACH

Experienced and Friendly Trainers at Danford College have a wide range of industry experience. Moreover, they have been selected and trained to appropriately relate to and support students in their learning.

RELEVANT CONTENT AND RESOURCES

Course content is regularly reviewed to ensure that it is up-to-date and relevant to the needs of the industry. Students and staff have access to a range of high-quality, comprehensive, and informative resources. Our up-to-date course content is available to students on our digital platform: CANVAS.

CLASS STRUCTURE

At Danford College all qualifications are delivered entirely

face-to-face in our Melbourne Campus. (Minimum of 20 hours of classroom contact per week). Courses consist of classroom-based training (maximum of 26 students) of theory and practical sessions with small groups.

ASSESSMENT

Students must demonstrate competency through highly practical and interactive assessments. These include: Practice exercises that reinforce interpersonal skills, Simulated training activities, Learner Resource Workbooks to support training, Independent research projects and Participation in simulated activities that closely reflect workplace processes.

For further information visit our website at www.danford.edu.au



Jobs

Graduates of Engineering and related Technology field (Advanced Diploma) are most often employed as:

- 33.9%** Technicians and Trade Workers
- 30.6%** Professionals
- 9.8%** Managers

Reference source: <https://www.yourcareer.gov.au/>

Industries

Graduates of Engineering and related Technology field (Advanced Diploma) are most often employed in:

- Construction,
- Professional, Scientific, Technical Services
- Public Administration and Safety

For information about entry requirements visit our website at www.danford.edu.au **Digital Access refers to your learning resources and assessments via our learning management system.