



through



DIPLOMA IN ENGINEERING (CIVIL)

UNIFIED

2012 Programme Information



CONTENTS

1. BACKGROUND	2
2. A CAREER IN CIVIL ENGINEERING	2
3. ADMISSION CRITERIA.....	2
SPECIAL ADMISSION CRITERIA.....	2
ENGLISH LANGUAGE REQUIREMENTS	3
4. PROGRAMME STRUCTURE.....	3
5. METHOD OF DELIVERY	4
5.1 BLOCK COURSES	4
5.2 BLOCK COURSE FORMAT.....	4
5.3 COURSE MANAGEMENT SYSTEM	4
6. RECOGNITION OF PRIOR LEARNING (RPL)	5
7. TRANSITION ARRANGEMENTS	6
8. HOW TO APPLY	7
9. CONTACT DETAILS FOR INQUIRIES.....	7
ENTRY ASSESSMENT FORM.....	8

Diploma in Engineering (Civil) - Unified

[Programme Code: TK1019]

1. BACKGROUND

The Unified Diploma came into force in 2011. It remains a level 6, 240 credit qualification and retains its name of Diploma in Engineering (Civil). Differences of note from the previous structure are:

- Programme content is similar but re-structured into 16 courses (12 compulsory plus 4 electives – three of which must be at Level 6)
- All courses are of 15 credit value
- Four of the compulsory courses are common to the mechanical, electrical and civil diplomas
- The Consortium of Polytechnics has been replaced by the NZ Board of Engineering Diplomas (NZBED) overseeing the Civil, Mechanical and Electrical Diplomas.

Transition arrangements for students who started the Programme under the previous structure are discussed in Section 7.

The Diploma in Engineering (Civil) [DipEng (Civ.)] undertaken on a full-time basis takes about 2 years to complete, depending on a student's entry level.

NZIHT, through the Western Institute of Technology at Taranaki (WITT), offers this programme on a part time basis using a mixed-mode delivery format. This method of delivery caters specifically for the needs of students who are unable to attend a conventional full-time programme. More details on the method of delivery are given in Section 5.

2. A CAREER IN CIVIL ENGINEERING

The DipEng (Civ) prepares a student for a career in the civil engineering industry. Civil engineers plan, design and construct the infrastructure in which we live and work. This includes the establishment of facilities like roads, railways, airports, water supply, drainage, wastewater disposal, bridges, dams, multi-storey buildings, tunnels and other public works.

Civil engineers are employed by a range of different organizations including district and city councils, engineering consultants, contractors, transportation agencies such as NZ Transport Agency, academic institutions, environmental agencies etc.

3. ADMISSION CRITERIA

Minimum Academic Entry Criteria

For entry to this programme, applicants are required to have –

- ☐ A minimum total of 48 credits at level 2 in four subjects including at least 12 credits in Mathematics, **or**
- ☐ equivalent qualifications (eg International Baccalaureate or Cambridge), **or**
- ☐ equivalent credits from appropriate trades training and/or demonstrated skills and experience
- ☐ Minimum of 8 literacy credits at level 1 or higher including 4 reading and 4 writing

Special Admission Criteria

Applicants who do not meet the requirements for normal admission may be admitted to the Programme if they undertake the Certificate in Engineering Technology and successfully complete the prescribed requirements.

English Language Requirements

In addition, the following requirements apply to applicants in both admission categories:

- Applicants whose first language is not English, or who come from a country where the language of instruction in schools or other teaching institutions is not English, are required to provide evidence of having met certain minimum English language requirements.
- Overall Band Score (Academic) of 6.0 IELTS, with no individual score less than 5.5, or equivalent.

Acceptance

Candidates wishing to enrol for the NZ Diploma in Engineering (Civil) must complete the Entry Assessment Form and return it with supporting documentation to the Programme Administrator for evaluation.

Following the review of the applications by the Programme Manager each candidate will be informed in writing of the result. There is a requirement that candidates accepted onto the Programme must, for the purposes of obtaining the Diploma, complete a Western Institute of Technology at Taranaki (WITT) Student Study Contract (enrolment) form.

Applicants will receive the Student Study Contract for WITT when they are notified of their acceptance onto the Programme.

Please note a student is confirmed onto the Programme when NZIHT has received the Student Study Contract from the student. A confirmation letter giving final course details will be issued prior to the start of the first block course.

4. PROGRAMME STRUCTURE

At the lower levels of study, students receive a fundamental grounding in engineering principles and practice. This broad-based grounding is extended at higher levels in specialist fields.

The length of **Study blocks** varies according to the credit rating and the nature of individual courses.

Table 1 – NZ Diploma in Engineering (Civil) Programme

Code DEC	Course 12 Compulsories (Bold) + FOUR electives (at least THREE at Level 6)	C or E ¹	Level	Credits	EFTS	Pre or Co-Requisites
4.101	Eng. Fundamentals	C	4	15	0.125	
4.102	Eng. Mathematics 1	C	4	15	0.125	
4.103	Technical Literacy	C	4	15	0.125	
4.201	Materials (Civil)	C	4	15	0.125	
5.207	Geotechnical Eng. 1	C	5	15	0.125	
5.201	Structures 1	C	5	15	0.125	DEC4.101
4.202	Land Surveying 1	C	4	15	0.125	
5.202	Civil & Structural Drawing	C	5	15	0.125	DEC4.103
6.101	Eng. Management	C	6	15	0.125	
6.299	Eng. Project (Civil)	C	6	15	0.125	DEC4.103, DEC4.201,DEC5.207,
5.203	Hydraulics (Civil)	C	5	15	0.125	DEC4.101 (Co-), DEC4.102 (Co-)
5.204	Highway Eng. 1	C	5	15	0.125	
5.205	Eng. Surveying	E	5	15	0.125	DEC4.202
5.206	Structures 2	E	5	15	0.125	DEC5.201, DEC4.102 (Co-)
6.201	Geotechnical Eng. 2	E	6	15	0.125	DEC5.207
6.205	Water & Waste Water Systems	E	6	15	0.125	DEC5.203
6.206	Water & Waste Water Management	E	6	15	0.125	
6.202	Highway Eng. 2	E	6	15	0.125	DEC5.204
6.203	Traffic Engineering	E	6	15	0.125	DEC4.102 (Co-)
6.204	Structures 3	E	6	15	0.125	not offered by NZIHT in 2012
6.207	Land Surveying 2	E	6	15	0.125	
C = Compulsory E = Elective						
Fees are \$640 (inclusive of GST) per course						

5. METHOD OF DELIVERY

5.1 Block Courses

A combination of contact sessions, called **Study Blocks**, and structured self-directed study is used to deliver the programme. The self-directed study component is undertaken in the student's own time at home with the aid of course notes and a proposed work programme. Interaction with the course presenter as and when required is via e-mail or telephone. Interaction with the course presenter and fellow students can also be made through the Course Management System website (NZIHTCMS).

The length of the **Study Blocks** varies according to the nature of individual courses.

This method of delivery enables candidates to acquire the qualification on a part-time basis. A person in full-time employment, who is willing to work hard, should be able to undertake 2 to 3 courses per semester. On this basis the programme can be completed in about 4 to 5 years.

The current venues where Study Blocks are delivered, subject to demand, are Hamilton, Christchurch, Auckland and Palmerston North. Other venues will be considered based on demand.

5.2 Block Course Format

The learning activities for each course comprise the following components:

1. Contact session(s), referred to as **Study Blocks**, totalling between 5 and 8.5 days approximately, normally broken into two blocks of equal duration per course.
2. Structured **self-directed study** involving Self Evaluation Exercises and Assignments.
3. Final Examination.

The Study Block **time tables** for courses offered in 2012 are given in **Appendix A**.

While the block course format, in essence, is a part-time study format specifically designed to cater for persons who are not in a position to attend full-time programmes, it is not a pure "correspondence course".

The course materials have not been designed to be completely "stand-alone". The Study Blocks fulfil an important supplementary role to the self-directed study component. Experience has shown that block course attendance is important for all courses.

- where there is a strong analytical content (e.g. Mathematics, Engineering Fundamentals, Structures 1, Hydraulics) and
- where labs and/or practicals are involved (e.g. Geotechnical Engineering, Surveying, etc)

There are, however, circumstances where attendance of block courses can be waived by the Programme Manager, for instance where students can offer prior learning or appropriate work-place experience *in lieu*. Please contact the course administrator for more information.

5.3 Course Management System

Candidates accepted onto the Programme need independent access to the internet. NZIHT has introduced a Course Management System Website (CMS for short) to facilitate the interaction between fellow students, tutors and administrators of the Dip Eng (Civil) Programme.

The address is www.nzihcms.co.nz

CMS is a website where:

- Administration staff post some of the admin resources commonly required by the student and communicates logistics, including venue and timetable information
- Students can ask course related questions of the course presenters,

- Course presenters can discuss course related matters or disseminate additional information (including model answers for tests and assignments),
- Question-and-answer discussion trails (discussion forum) can be facilitated among members of a class group (including the course presenter),
- Marks for tests and assignments are posted during the progress of courses.

Students are provided with a user name and password to gain access to the site and its facilities.

6. RECOGNITION OF PRIOR LEARNING (RPL)

Candidates who can provide evidence of prior study, or work related experience, that shows a direct correlation to a course offered in the programme may be eligible for cross credit/credit transfer of that subject.

A formal application process must be entered into by the student in order to gain such a credit (an application fee is payable). The Programme Manager can give an opinion on the likelihood of success but all applications are subject to the approval of the Board of Studies.

It is important for candidates to supply copies of results transcripts, and desirably an updated CV, to enable the Programme Manager to give advice on eligibility and possible cross credits/credit transfers.

Table 2 below lists examples of eligibility:

CIVIL - Transition Arrangements for Cross credit from NZDE(Civil) (Consortium Structure)

		Transitioning from NZDE(Civil) (Consortium Diploma)
Code	Course title	Course
DEC4.101	Engineering Fundamentals	DCE3.358 Mechanics
DEC4.102	Engineering Mathematics 1	DCE4.450 Engineering Mathematics 1A, and DCE4.451 Engineering Mathematics 1B
DEC4.201	Materials (Civil)	DCE4.457 Engineering Materials, and DCE4.459 Geology
DEC4.201	Materials (Civil)	DCE4.457 Engineering Materials, and DCE4.459 Geology
DEC4.202	Land Surveying 1	DCE4.452 Land Surveying
DEC5.201	Structures 1	DCE4.558 Structures 1 or DCE4.458 Structural Analysis
DEC5.202	Civil and Structural Drawing	DCE5.552 Civil Drawing, and DCE5.553 Structural Drawing
DEC5.203	Hydraulics (Civil)	DCE5.506 Fluid Mechanics
DEC5.204	Highway Engineering 1	DCE5.557 Traffic and Highway Engineering
DEC5.205	Engineering Surveying	DCE5.556 Engineering Surveying
DEC5.206	Structures 2	DCE5.555 Intermediate Structures, or DCE5.655 Structures 2
DEC5.207	Geotechnical Engineering 1	DEC4.456 Geotechnical Engineering 1
DEC6.101	Engineering Management	DCE6.651 Contract Administration
DEC6.201	Geotechnical Engineering 2	DCE5.554 Geotechnical Engineering 2
DEC6.202	Highway Engineering 2	DCE6.657 Road Design and Maintenance
DEC6.203	Traffic Engineering	DCE6.656 Traffic Engineering
DEC6.204	Structures 3	DCE6.653 Structural Theory and DCE6.654 Structural Design, or ENGG6024 Structural Design A, or ENGG6025 Structural Design B
DEC6.205	Water and Wastewater Systems	DCE6.605 Public Health: Water, and DCE6.606 Public Health: Waste
DEC6.206	Water and Wastewater Management	DCE6.605 Public Health: Water, and DCE6.606 Public Health: Waste
DEC6.299	Engineering Project (Civil)	DCE6.652 Construction Practices

7. TRANSITION ARRANGEMENTS

Students enrolled in the Programme prior to 2011 can choose to stay with the structure in force at the time. They have until 2015 to complete the Programme under that structure.

However, such students may choose to transition to the new structure. The following table sets out the conditions under which successfully completed courses are eligible for transition to the new structure:

Consortium Diploma – 13 Compulsories (Bold)		Unified Diploma 12 Compulsories (Bold)	
ELECTIVES: FIVE Level 5 + THREE Level 6 OR THREE Level 5 + FOUR Level 6		Require 16 courses, ie. + FOUR electives (at least THREE at Level 6)	
Code DCE	Course	Code DEC	Course
2.002	Intro Maths		
2.001	Eng Dwg	4.103	Techn. Lit. (Dwg)² Techn. Lit. (Comm)³
3.358	Mechanics	4.101	Eng. Fundamentals
4.450 4.451	Eng Maths 1A & Eng Maths 1B }	4.102	Eng Mathematics 1
4.457 4.459	Eng. Materials & Geology }	4.201	Materials (Civil)
4.456	Geotechnical Eng 1	5.207	Geotechnical Eng. 1
4.454	Hydraulics & Hydrology		
4.558	Struct.1 or Str.Analysis	5.201	Structures 1
4.452	Land Surveying	4.202	Land Surveying 1
5.552 5.553	Civil Drawing, & Structural Drawing }	5.202	Civil & Struct. Dwg
6.651	Contract Adm.	6.101	Eng. Management
6.652	Construction Practices	6.299	Eng. Project (Civil)
5.509	Fluid Mechanics	5.203	Hydraulics (Civil)
5.557	T & H Eng	5.204	Highway Eng. 1
5.556	Eng Surveying	5.205	Eng. Surveying
5.655	Structures 2	5.206	Structures 2
5.554	Geotechnical Eng 2	6.201	Geotechnical Eng. 2
6.605 6.606	PH: Water & PH: Waste } See Note 1	6.205 6.206	{ Water & WW Syst. & Water & Waste Man.
6.657	Road Des.& Maint.	6.202	Highway Eng. 2
6.656	Traffic Engineering	6.203	Traffic Engineering
6.550	Eng. Maths 2A		
6.558	Eng. Maths 2B		
Note 1: PH:Water & PH:Waste combined give credit for the two Water courses in the Unified Diploma. Individual credit for the Water courses separately is not possible. The two Water courses in the Unified Diploma are each worth 15 credits.			
Note 2: Tech.Lit(Dwg) is the Drawing part of Technical Literacy. Credit for this part is awarded on the basis of successful completion of CID2.001 or DCE5.552 or DCE 5.553			
Note 3: Tech.Lit(Comm) is the Communications part of Technical Literacy. Credit for this part is achieved upon completion of any FOUR of Eng.Maths 1A; H&H; Geotech 1; Eng. Materials; Geology; Construction Practices.			

Students wishing to transition to the new structure are required to make a formal application under the Recognition of Prior Learning application process. Students enrolled in the NZDE (Civil) programme with NZIHT prior to 2011 are able to cross credit successfully completed courses at no cost.

- Note:
- For students who are enrolled in the Consortium version of NZDE(Civil) when the new Unified version of NZDE(Civil) takes effect, the option of transitioning to the Unified version is available if they have completed less than half (<120 credits) of the Consortium Diploma.
 - For students who have completed half, or more (≥120 credits), of the Consortium diploma, transitioning is available provided it does not result in a total credit gain ("credit inflation") exceeding 7 credits.

A small charge applies to students who have completed courses with other members of the Consortium of Polytechnics and wish to transfer their record of learning to NZIHT.

The final date for transition from these existing qualifications is 31 December 2015

8. HOW TO APPLY

Complete the attached Entry Assessment Form and send it to the address given below. Attach any additional information or documents (e.g. CV) that may assist the Programme Manager in determining your eligibility, possible exemptions and which courses you should enrol for.

Once your eligibility and subject choices have been confirmed, you will be sent an enrolment form.

Enrolment: Semester 1 courses: Enrolment forms are received from November until late January.
Please enroll as early as possible.

Students may enroll for semester 1 & 2 at the start of the year.

Semester 2 courses: June through middle July.

9. CONTACT DETAILS FOR INQUIRIES

The Programme Administrator
NZIHT
PO Box 27050
Garnett Avenue
Hamilton 3257

Tel : (07) 850 8330
Fax : (07) 850 8329
e-mail : civil@nziht.co.nz

ENTRY ASSESSMENT FORM

On the basis of the information you supply, we will assess your application to join the NZ Dip Eng (Civil) Programme. An Enrolment pack, including recommendations on which courses to enroll for, is supplied after this assessment is completed. **Please supply with this form a copy of all result transcripts/ CV.**

Mail to:

**Programme Manager
NZ Institute of Highway Technology
PO Box 27050
Garnett Avenue
Hamilton 3257**

Personal Details

Name:						
Address:						
Phone:		(Home)		(Work)		(Mobile)
Email:		(Home)		(Work)		
Date of Birth:		Citizenship <small>(Please tick appropriate box)</small>	New Zealand Citizen <input type="checkbox"/>	Permanent Resident <input type="checkbox"/>	Other <small>(Please Specify)</small> <input type="checkbox"/>	
					

Academic History

Provide all the information that will help us to determine your eligibility to enroll in the programme and for possible cross credits or exemptions from components of the programme. An updated CV is very useful.

(a) Secondary Level

Please tick the levels you have achieved and attach a copy of the results transcripts.

		School Subjects/Courses completed for which results transcripts have not yet been received.	
		Level	Course
<input type="checkbox"/>	NCEA Level 1 (5 th Form Certificate)		
<input type="checkbox"/>	NCEA Level 2 (6 th Form Certificate)		
<input type="checkbox"/>	NCEA Level 3 (Bursary)		
If you have completed any of the above, but have not received the results yet, list the courses you have studied in the column on the right.			

(b) Tertiary Level

Please provide information of any tertiary studies completed to date:

If you already know which courses you wish to enroll for in 2012, indicate them on the **Course Selection Form** overleaf otherwise leave the form blank.

NZ Diploma in Engineering (Civil) (Consortium)
Shaded areas indicate a course is not offered at that venue

Venue abbreviations: HMN = Hamilton CHC = Christchurch AKL = Auckland PMN = Palmerston North

Course Code	Course Name	Level	Credits	Pre-requisites & Recommendations (see How to Choose your Courses)	2012							
					Semester 1				Semester 2			
					HMN	CHC	AKL	PMN	HMN	CHC	AKL	PMN
DCE3.358	Mechanics	3	12	<i>CID2.002²</i>								
DCE4.450	Engineering Mathematics 1A	4	9	CID2.002								
DCE4.451	Engineering Mathematics 1B	4	9	CID2.002								
DCE4.457	Engineering Materials	4	9									
DCE4.456	Geotechnical Engineering 1	4	9	<i>CID2.002²</i>								
DCE4.454	Hydraulics & Hydrology	4	9	<i>CID2.002²</i>								
DCE4.558	Structures 1	4	9	DCE3.358								
DCE4.452	Land Surveying	4	9	<i>CID2.002²</i>								
DCE4.459	Geology	4	9									
DCE5.552	Civil Drawing	5	12	CID2.001								
DCE5.553	Structural Drawing	5	12	CID2.001								
CET3.001	<i>Introduction to CAD¹</i>	-	-	Students with basic CAD skills do NOT have to enrol for CET3.001								
DCE6.651	Contract Administration	6	12									
DCE6.652	Construction Practices	6	12	<i>DCE4.457²</i> <i>DCE5.557²</i>								
DCE5.554	Geotechnical Engineering 2	5	12	DCE4.456								
DCE5.556	Engineering Surveying	5	12	DCE4.452								
DCE5.506	Fluid Mechanics	5	12	DCE4.454								
DCE5.557	Traffic & Highway Eng	5	12	<i>DCE5.552</i> <i>DCE4.457²</i>								
DCE5.655	Structures 2	5	12	DCE4.558								
DCE6.657	Road Design & Maintenance	6	18	DCE5.557								
DCE6.605	Public Health: Water	6	18	DCE5.506								
DCE6.606	Public Health: Waste	6	18	<i>DCE4.454²</i>								
DCE6.656	Traffic Engineering	6	18	DCE5.557								

- Notes:
1. Introduction to CAD is not a compulsory course. Students who have enough competence to complete the Structural Drawing Assignments using a CAD software package, do not have to enrol for the CAD course. (*Introduction to CAD belongs to the Certificate in Engineering Technology cohort of courses*)
 2. Pre-requisites in *italics* are not compulsory prerequisites in the Programme Regulations. However, it is strongly advised that students observe the stated (italicised) recommendations before attempting these courses.

All courses scheduled will be offered subject to sufficient demand

NZ Diploma in Engineering (Civil) (Unified)
Shaded areas indicate a course is not offered at that venue

Venue abbreviations: HMN = Hamilton CHC = Christchurch AKL = Auckland PMN = Palmerston North

Course Code	Course Name	Level	Credits	Pre-requisites or Co-Requisites	2012							
					Semester 1				Semester 2			
					HMN	CHC	AKL	PMN	HMN	CHC	AKL	PMN
Compulsory Courses: 12 (Total compulsory credits =180)												
DEC4.101	Eng. Fundamentals	4	15									
DEC4.102	Eng. Mathematics 1	4	15									
DEC4.103	Technical Literacy	4	15									
DEC4.201	Materials (Civil)	4	15									
DEC5.207	Geotechnical Eng. 1	5	15									
DEC5.201	Structures 1	5	15	DEC4.101								
DEC4.202	Land Surveying 1	4	15									
DEC5.202	Civil & Structural Drawing	5	15	DEC4.103								
DEC6.101	Eng. Management	6	15									
DEC6.299	Eng. Project (Civil)	6	15	DEC4.103, DEC4.201, DEC5.207								
DEC5.203	Hydraulics (Civil)	5	15	DEC4.101 (Co-) DEC4.102 (Co-)								
DCE5.204	Highway Eng. 1	5	15									
Elective Courses: 4 Please note: At least THREE at level 6 (Total elective credits = 60)												
DEC5.205	Eng. Surveying	5	15	DEC4.202								
DEC5.206	Structures 2	5	15	DEC5.201 DEC4.102 (Co-)								
DEC6.201	Geotechnical Eng. 2	6	15	DEC5.207								
DEC6.205	Water & Waste Systems	6	15	DEC5.203								
DEC6.206	Water & Waste Management	6	15									
DEC6.202	Highway Eng. 2	6	15	DEC5.204								
DEC6.203	Traffic Engineering	6	15	DEC4.102 (Co-)								
DEC6.204	Structures 3	6	15	Not offered by NZIHT								
DEC6.207	Land Surveying 2	6	15	Not offered by NZIHT								

All courses scheduled will be offered subject to sufficient demand