

Programme Regulations for:

Graduate Diploma in Engineering Technology

with Strands in: **Mechanical; Mechatronics; Power; Water and Water Waste; Rooding/Transportation**

Wintec code:	EN1801	MoE:	WK3760
Level:	7	Credits:	120
Owner:	Centre for Engineering and Industrial Design	Effective Date:	January 2019

These regulations should be read in conjunction with the Institute's Academic Regulations.

1. Admission and Entry

1.1 General Academic Admission

Candidates are required to have:

- Successfully completed a bachelor degree in an engineering discipline (excluding a specialisation in the strand the candidate wishes to complete in this programme), with a pass mark of 65% or more, from a New Zealand institution, **or**
- Successfully completed a bachelor degree in an engineering discipline from an approved and accredited overseas institution, with a pass mark of 65% or more or a Cumulative GPA of 6.5 or more; and completed their degree within 5 years; **or**
- Successfully completed the New Zealand Diploma in Engineering (Level 6) (excluding a specialisation in the strand the candidate wishes to complete in this programme) **and** have further practical, professional or educational experience of an appropriate kind; **or**
- Evidence of equivalent practical, professional or educational experience, as approved by the Centre Director or designated nominee.

1.1 Special Admission

Domestic applicants aged 20 years or above who have not met the General Admission or entry requirements for a programme but whose skills, education or work experience indicate that they have a reasonable chance of success¹ may be eligible for Special Admission. Special admission will be granted at the discretion of the Centre Director or designated nominee. Such applicants may be required to successfully complete a foundation, bridging or tertiary introductory programme as a condition of entry into higher level programmes.

1.2 English Language Requirements

Candidates who have English as a second language are required to have an overall International English Language Test System (IELTS) score of 6.0 or better in the academic band, with a minimum of 6.0 in the written and speaking bands, and a minimum of 5.5 in the reading and listening bands; **or** equivalent.

2. Transfer of Credit

- Transfer of credit at graduate level is case by case but will not exceed more than 50% of the programme;
- Recognition of Prior Learning (RPL) and/or Transfer of Credit will be available for all modules within this programme **except for** module *MG7101 Engineering Development Project*.

3. Programme Requirements

¹ [Education Act 1989 Section 224 \(3\)](#)

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- 3.1 Every candidate for the Graduate Diploma in Engineering Technology (L7), with strands, shall to the satisfaction of the Academic Board follow a programme of full-time study for a period of normally not less than one year.
- 3.2 To pass a module, all candidates must achieve a minimum grade of 40% for assessments that have a weighting of 40% or more towards the final mark of a module; and an overall mark of 50% must be achieved for the module. All assessments must be attempted.
- 3.3 Each candidate's programme of study shall comprise compulsory and elective modules as listed in Section 6 of these regulations, totalling 120 credits (with a minimum of 75 credits at Level 7), as follows:
- Candidates completing the Graduate Diploma in Engineering Technology (Level 7) Mechanical Strand, must complete all modules in Groups A and B, plus an elective module at Level 7 from Group G;
 - Candidates completing the Graduate Diploma in Engineering Technology (Level 7) Mechatronics Strand, must complete all modules in Groups A and C, plus an elective module at Level 7 from Group G;
 - Candidates completing the Graduate Diploma in Engineering Technology (Level 7) Power Strand, must complete all modules in Groups A and D, plus an elective module at Level 7 from Group G;
 - Candidates completing the Graduate Diploma in Engineering Technology (Level 7) Water and Water Waste Strand, must complete all modules in Groups A and E, plus an elective module at Level 7 from Group G;
 - Candidates completing the Graduate Diploma in Engineering Technology (Level 7) Rooding/Transportation Strand, must complete all modules in Groups A and F, plus an elective module at Level 7 from Group G.

4. Completion of the Programme

A candidate may take up to three years to complete this programme, unless an extension is granted by special permission of the Centre Director or designated nominee.

5. Award of the Qualification

Candidates who successfully complete all applicable Strand requirements in Section 3 of these regulations will be awarded the Graduate Diploma in Engineering Technology (Level 7) in the relevant Strand.

6. Schedule of Modules

- 6.1 The absence of an entry in the Pre-Requisite and Co-Requisite columns means that there are no pre/co-requisites for that module.
- 6.2 Pre-Requisites and Co-Requisites may be waived at the discretion of the Centre Director or designated nominee.

Group A: Common compulsory module all strands

Module Code	Module Name	Level	Credits	Pre-Requisites	Co-Requisites
MG7101	Engineering Development Project	7	30	Minimum of 30 credits at level 6 in chosen major; and Civil: MG6106; and Electrical/Mechanical: MG6136	

Group B: Compulsory modules Mechanical Strand

Module Code	Module Name	Level	Credits	Pre-Requisites	Co-Requisites
MG6032	Fluid Mechanics	6	15	MG5002	

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Module Code	Module Name	Level	Credits	Pre-Requisites	Co-Requisites
				MG5004	
MG6037	Advanced Thermodynamics	6	15	MG5030	
MG6039	Applied Computational Modelling	6	15	MG6032 MG6038	
MG7022	Energy Engineering	7	15	MG6037	
MG7024	Fluids Power & Advanced Fluid Mechanics	7	15	MG6032	

Group C: Compulsory modules Mechatronics Strand

Module Code	Module Name	Level	Credits	Pre-Requisites	Co-Requisites
MG5018	PLC Programming 1	5	15	MG5001 & MG5014 or MG5033 or MG5034	
MG6031	Instrumentation & Control 2	6	15	MG5004 MG5026	
MG6033	Mechanics of Machines	6	15	MG5002 MG5004	
MG7017	Robotics	7	15	MG6019 MG6033	
MG7018	Systems & Control	7	15	MG6031	

Group D: Compulsory modules Power Strand

Module Code	Module Name	Level	Credits	Pre-Requisites	Co-Requisites
MG5016	Elements of Power Engineering	5	15	MG5015 or MG5034	
MG5017	Electrical Machines	5	15	MG5015 or MG5034	
MG6117	Power Distribution	6	15	MG5016	
MG7011	Electrical Machine Dynamics	7	15	MG5017	
MG7110	Power Systems	7	15	MG5016	

Group E: Compulsory modules Water and Water Waste Strand

Module Code	Module Name	Level	Credits	Pre-Requisites	Co-Requisites
MG6109	Water & Waste Engineering	6	15		MG5008
MG6110	Water & Waste Treatment	6	15		
MG6011	Hydrology and Erosion Management	6	15		
MG7005	Urban Drainage Systems	7	15	MG6109	
MG7047	Special Topic	7	15		

Group F: Compulsory modules Roading/Transportation Strand

Module Code	Module Name	Level	Credits	Pre-Requisites	Co-Requisites
MG6014	Highway Design & Maintenance	6	15	MG5012	
MG6015	Traffic Engineering	6	15	MG5012	MG5004

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MG6116	Sensitive Environments	6	15		
MG7007	Urban Transport Planning	7	15	MG5012	
MG7047	Special Topic	7	15		

Group G: Common elective modules all Strands

Module Code	Module Name	Level	Credits	Pre-Requisites	Co-Requisites
MG6048	Special Topic	6	15		
MG6190	Mathematics 2	6	15	MG5004	
MG7025	Project Management	7	15	MG6103	
MG7026	Risk Management	7	15	MG6103	
MG7047	Special Topic	7	15		