Graduate Diploma in Engineering (Highways) (Level 7)

Domestic Fees
$7,434

International Fees
$30,070

Duration
1 year full-time or equivalent part-time (domestic students only)

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WESTERN INSTITUTE OF TECHNOLOGY AT TARANAKI
TE KURA MATATINI O TARANAKI

Graduate Diploma in Engineering (Highways) (Level 7)

Add valuable highway engineering and applied management skills to your engineering qualification and take your career places. With the combination of specialised technical knowledge and management skills you will increase your career options and be able to gain sought after management roles.

Graduates will be able to:

- apply advanced technical knowledge in a highway design or construction environment.
- innovatively apply and modify practices in the field of highway engineering.
- creatively plan, design, control, budget and prioritise highway construction and maintenance programmes to stand ards required by the engineering profession.
- provide managerial input into highway engineering projects and activities.
- implement and complete projects without direct supervision.
- undertake a wide range of support activities, including organization, management, liaison and public relations.
- analyse and evaluate technical and economic options.
- display substantial personal and professional communication skills, both verbal and written.
- exercise responsibility for the work of others, including cost effective allocation of resources.
- maintain individual quality standards.
- continue studies towards higher professional or managerial qualifications.

Courses

GEH7.301

Wearing Surface Technology

Study road wearing surface technology including material requirements, construction technology and the design of sprayed seals and asphaltic concrete mixes.

GEH7.312

Highway Engineering Fundamentals

Introduce the fundamentals of road materials, road construction practices and road maintenance techniques, as well as the principles and techniques related to road asset management and road maintenance management.

GEH6.203

Traffic Engineering

Learn traffic engineering concepts and fundamentals.

GEH6.208

Land Surveying for Engineers

Outline theoretical knowledge and concepts of Land Surveying within an engineering context, and develop practical surveying skills.

GEH6.309

Contract Management

Develop the knowledge and skills required to administer and manage contracts and projects effectively in a specific discipline of engineering.

GEH7.341

Geometric Design

Demonstrate knowledge and understanding of road geometrics and apply these to the safe, functional and aesthetic design of road alignments in accordance with the requirements of current Code of Practice.

GEH7.351

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Drainage Design

Learn to evaluate the components of highway drainage systems, and design surface and sub-soil drainage systems for urban and rural roads.

GEH7.361

Pavement Design

Present an in depth treatment of pavement design and pavement rehabilitation design fundamentals and produce designs for new pavements and rehabilitation projects, obeying current Codes of Conduct.

Admission Requirements

The applicant must:

- have an appropriate (e.g. engineering, science, geology, or similar) degree or higher tertiary qualification, and:
- satisfy the Programme Manager, with advice from academic staff, that they have sufficient knowledge of mathematics to ensure successful completion of the programme.

Special admission

In special circumstances applicants who are able to show evidence of an ability to succeed in the programme may be considered for admission, provided that:

- They have completed a qualification from another tertiary provider deemed by the Programme Manager to bring them to the required academic entry level; or
- In the opinion of the Programme Manager, with advice from other academic staff or National Advisory Committee members, have equivalent knowledge and skills; previous and ongoing life or work experience; or other formal or informal study, comparable with the requirements of the normal admission requirements, together with strong likelihood of successful programme completion. A student entering the Graduate Diploma programme under the above provisions may be required to follow an approved introductory course of study as a pre-requisite or co-requisite.

Selection criteria

Entry to the GradDipEng(Highways) will be in order of receipt of completed enrolments. Applicants who seek entry to the GradDipEng(Highways) under the Special Admission Entry Criteria above, may be required to:

- Participate in an interview; and/or
- Submit a portfolio; and/or
- Supply references; and/or
- Produce other supporting documentation.

All enrolments in the programme are at the discretion of the Programme Manager, in consultation with other academic staff or National Advisory Committee members as required.

English Language

In addition, the following requirements apply to applicants in both admission categories:
Applicants whose first language is not English, are required to provide evidence of having met the following minimum English language requirements:

- IELTS: an overall proficiency score of 6.0 (academic version), with no sub-test score lower than 5.5; or
- TOEFL 550 together with TWE of 5.0; or
- Pearson Test of English (Academic) PToE (Academic) score of 50; or
- Provide evidence of having passed other tests of English language competence, as approved by the WITT Te Pūkenga Academic Board.

Career Options

Design, construction and maintenance of roads, project management, infrastructure planning and development, asset management, company management, local Government, tertiary teaching.

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Additional information

Delivered via block course and supported distance learning

Timetable

http://witt-uat.sites.silverstripe.com/assets/Programme Documents/2023-Grad-Dip-Hways-timetable-v1.pdf

(72 KB)