



MOUNT ALBERT GRAMMAR SCHOOL
CAREERS DEPARTMENT

Engineering

Subject Selection and Tertiary Course Entrance Information

This information has been prepared from brochures, newsletters, etc. supplied by tertiary institutions and is correct at the time of writing. However, the institutions frequently alter their criteria so it is strongly advised that you check the details with the relevant institution. *There may be different admission requirements for various groups of students e.g. Maori, Pacific, International, Disabled, etc. Individual students should check for details.*

November 2016

University Entrance Standard under NCEA: Entry requires 14 credits at Level 3 in three approved subjects, plus NCEA Level 3, plus literacy (5 Level 2 Reading and 5 Level 2 Writing) and numeracy (10 Level 1 Maths) requirements. Further details are available on request.

Calculation of Ranked Scores under NCEA: Excellence credits are awarded 4 points, Merit credits 3 points and Achieved credits 2 points. This applies to the best 80 Level 3 credits in 5 approved subjects, with a maximum of 24 credits for each subject.

Recommended:	This means it is not essential to take the subjects to gain entry to a course, but it is often difficult to succeed without some prior knowledge.
Pre-requisite:	Essential to gain entry to a course.
Limited Entry:	This course has a limit to the number of students it can take in any one year, but this should not act as a deterrent if a sufficient standard has been reached.

University of Auckland

Bachelor of Engineering (Honours) (4 years)

Pre-requisites:	Students <u>must</u> take Calculus and Physics for Level 3 NCEA.
Recommended:	Chemistry, Biology, Language-rich subjects.
2017 entry:	In addition to standard University Entrance (see above) and an additional academic English requirement NCEA applicants will be assigned a rank order based on the best 80 credits at Level 3 or higher over a maximum of 5 approved subjects, weighted by the level of achievement attained in each set of credits. A total of 260 plus a minimum of 17 external credits in Level 3 Calculus and 16 external credits in Level 3 Physics will guarantee entry.
Entry into Part II:	The following specialised courses are chosen in the second year. Each specialisation has a limited number of places. Selection is based on the Part 1 academic results. Biomedical engineering Chemical and materials engineering Civil and environmental engineering Computer systems engineering Electrical and electronic engineering Engineering science Mechanical engineering Mechatronics engineering Software engineering

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Bachelor of Engineering (Honours) (4 years)

Specialisations available:	Architectural, Construction, Electrical and Electronic, Mechanical, Marine and Offshore, Naval Architecture, Ocean, Mechatronics, Software Engineering.
Pre-requisites:	Students <u>must</u> take Calculus and Physics for Level 3 NCEA.
2017 entry:	Standard University Entrance (see above) plus a rank score of 250 and 14 NCEA Level 3 credits in Calculus and Physics will guarantee entry. All other applicants

who have UE including L3 Calculus and Physics will be considered on a case-by-case basis. An interview may be required.

Bachelor of Engineering Technology (3 years)

Majors available in: Computer and Mobile Systems, Electrical, Electronic, Mechanical, Network and Communication, Asset and Facilities Management, Building Services, Construction Safety, Building Surveying.

Preferred: Level 3 Digital Technologies, Technology, English

2017 Entry: Standard University Entrance (see above) plus any L3 Maths subject and L2 or above Physics

NB: The 1 year Certificate in Science and Technology is designed as a foundation for the Computer and Engineering degrees but does not guarantee entry.

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Bachelor of Engineering Technology (Civil and Electrical) (3 years)

2017 entry: Standard University Entrance (see above). Must include 14 Level 3 credits in each of Mathematics and Physics plus credits in 3 other approved L3 subjects (refer to website).

New Zealand Diploma in Engineering (Civil and Electrical) (2 years)

2017 entry: A minimum of 48 NCEA credits at Level 2 in best four subjects, including at least 12 credits in Mathematics and 8 Literacy credits at Level 1.

This Diploma can lead into the Degree course above.

The Certificate in Foundation studies and University preparation can also lead in to study for the Diploma or Degree.

MIT (Manukau Institute of Technology)

Bachelor of Engineering Technology (Electrical or Mechanical) (each 3 years)

2017 entry: Standard University Entrance (see above) including 14 Level 3 credits in each of Calculus and Physics.

New Zealand Diploma in Engineering (Electrical, Civil, Mechanical) (each 2 years)

2017 entry: NCEA Level 2 plus a minimum of 48 NCEA credits at Level 2 in four subjects, including at least 12 credits in Mathematics and 10 Literacy credits at Level 1.

University of Canterbury

Bachelor of Engineering (Honours) (4 years)

Specialisations available: Chemical & Process Engineering, Civil Engineering, Computer Engineering, Electrical & Electronic Engineering, Forest Engineering, Mechanical Engineering, Mechatronics Engineering, Natural Resources Engineering, Software Engineering.

Pre-requisites: Students must take Level 3 Calculus, Physics and Chemistry although Chemistry is not required for Computer, Electrical and Electronic and Software Engineering (an introductory chemistry course is offered).

2017 entry: In addition to standard UE (see above) a minimum of 14 Level 3 NCEA credits in Maths or Calculus (Must include AS 91578 and 91579), Physics and Chemistry (see above) is required. Entry to the second year is limited and is based on academic performance in the first year of study.

N.B. The above is only a small example of tertiary institutions that offer courses in this field. Many others are available and individual students should check these.