

Pathways in Engineering

Want to be an engineer?

To study engineering at UC you need to have a good foundation in Maths and Physics. For some engineering disciplines* Chemistry is also a must. You should aim to have at least 14 credits in each subject at NCEA Level 3 (18 credits is strongly recommended). Professional Engineers also need to have good oral and written communication skills.

Year 11

NCEA Level 1 Maths, Science, English

Year 12

NCEA Level 2 Maths (including Achievement Standards 91261 & 91262),
Physics, Chemistry*, English

Year 13

NCEA Level 3 Maths** (including Achievement Standards 91578 & 91579),
Physics, Chemistry*

Engineering First Year

Courses in Maths, Physics, Chemistry* and Engineering Design
+ Engineering Academic Skills (ENGR100)

Second Year, Third Year and Fourth Year

+ ENGR200 (Engineering Work Experience
+ First Aid Course)

Bachelor of Engineering (Honours)
BE(Hons) degree

For more information on preparation for the Engineering degree at UC, including IB and CIE requirements, visit www.canterbury.ac.nz/engineering/qualifications-and-courses/engineering/first-year

*For the following engineering disciplines, Chemistry is required at NCEA Level 2 and 3 (or equivalent):

- Chemical and Process Engineering, Civil Engineering, Forest Engineering, Mechanical Engineering, and Natural Resources Engineering
- This prepares you for the required 100-level Chemistry course taken in the Engineering First Year (for these disciplines).

**18 credits of Level 3 Mathematics including 91577 strongly recommended.

What kind of engineer do you want to be?

UC offers 9 engineering disciplines so you can tailor your learning to your specific interests:

Chemical and Process Engineering <ul style="list-style-type: none">• biofuels• petrochemicals• pharmaceuticals• renewable energy• biotechnology• food and dairy• environmental control	Civil Engineering <ul style="list-style-type: none">• structures• earthquakes• fire• hydrological engineering• timber• transport• geomechanics• environmental	Computer Engineering <ul style="list-style-type: none">• electronics• embedded systems• digital processes• hardware• signal processing• circuits• networks
Electrical and Electronic Engineering <ul style="list-style-type: none">• communications• power• electronics• image processing• nanotechnology	Forest Engineering <ul style="list-style-type: none">• forest operations• management harvesting• transportation• wood processing	Mechanical Engineering <ul style="list-style-type: none">• dynamics• materials• mechanics• manufacturing• biomedical
Mechatronics Engineering <ul style="list-style-type: none">• mechanics• electronics• sensor technology• robotics• control• embedded systems	Natural Resources Engineering <ul style="list-style-type: none">• renewable energy• bioresources• ecosystem restoration• engineered wetlands• water supply	Software Engineering <ul style="list-style-type: none">• computer systems• databases• network and data security• computer graphics• computational intelligence

For more information contact:

Student Advisors

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