



## Bachelor of Engineering (BE) Software Engineering



### What is Software Engineering?

Software Engineers build the software that drives the futuristic machines in our lives. Robots, mobile phones, cars, DVD players, washing machines, computer games – all these are driven by software. And that software must be reliable and flexible, usable and cost-effective – after all, we now depend on these devices. Building that kind of software requires a software engineer!

Ten years from now, the average household will contain several hundred computers, embedded in different appliances, toys and vehicles. You'll be able to check your text messages on your wall-screen TV, or watch TV on your phone. The world is changing rapidly, and software engineers are at the forefront of those changes.

Companies in New Zealand and overseas are looking for software engineering graduates. Forget the dot-com bust in 2001-2, the number of available software jobs in the USA, Australia and New Zealand is now higher than it was in 2000. "High-level software engineers, management consultants, and computer scientists are hot" this year, according to Business Week (23 Jan 2006). "They're hiring in Techland".

### BE in Software Engineering

Our BE in Software Engineering is a degree that lets you link

- the hardware with the software,
- your brain with the computer,
- your career with industry.

Our BE in Software Engineering is an innovative four-year degree that starts with C# programming and building solar cars in the first year, progresses through advanced programming techniques and computer hardware labs in the second year, then branches out into a wide variety of real-world programming skills in the third and fourth years. You'll also study design, marketing and engineering management.

After your second and third years of study, you will spend each summer in paid employment – working in an industry setting, developing new software.

In your fourth year, half your time will be spent on a team project to develop a major software application. With good grades in your fourth year, you can be awarded a BE Honours degree, which gives you a premier four-year professional degree that is accepted world-wide.



### Some reasons for studying Software Engineering

- Our work placement scheme means that you'll leave university with 800 hours of **paid** work experience, in software engineering.
- The BE papers emphasise innovation and practical business skills, so you'll have the background to be an entrepreneur as well as an inventor.
- You will gain a qualification in what is projected to be one of the fastest growing occupations over the next 10 years.

### Career opportunities

- Systems engineer:** coordinate the development of the systems for an entire organization. Design new software, and tailor third party software according to your company's needs. Manage system installation and maintenance, and plan for future growth.
- Development engineer:** analyse users' needs, then create specialist application software. Take the software through all stages of development, from design to launch.
- Test engineer:** ensure that new software does what it's supposed to do, without error. Work with end users and other engineers to create tests of software correctness and interaction design.
- Network engineer:** set up networks between computers, use firewalls and encryption to keep the networks safe, measure and improve the performance of networks. Build web sites and set up electronic commerce systems.

### Contact Details

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