UNIVERSITY OF CANTERBURY
Te Whare Wānanga o Waitaha
CHRISTCHURCH NEW ZEALAND

UC in Profile

For over a century the University of Canterbury has created knowledge and disseminated that knowledge to local, national and international communities by embedding values such as curiosity, discipline and courage in people.

This document provides a snapshot of how the University in 2009 is continuing to contribute to society's cultural, economic and technological advancement, and illustrates the potential we have to make an even greater contribution in the future.

Setting a course for UC's future development, and making it one of the great universities, is something we are currently giving significant thought to. We are asking ourselves what kind of university UC might want to be when it celebrates its 150th anniversary in 2023. Or more importantly, what kind of university UC will need to be when it reaches that milestone.

Critical to reaching the greatness we aspire to will be our relationships with alumni and other supporters, some of whom are in positions to provide — either through their connections or their own funds — access to additional resources. Others, just as importantly, are passionate advocates for the University — whether it's with friends and family, or in their working life.

If you are not already doing so, please consider how you might help us build on the good we do to become great so the world, our nation and the people who engage with us to learn and to conduct research can realise all that is possible.

Dr Rod Carr
Vice-Chancellor

www.canterbury.ac.nz

0800 VARSITY (827 748)

UC in Profile

Key facts

Students

Students enrolled[1]	16 787
Equivalent full-time students (EFTS)[2]	14 133

Enrolment growth

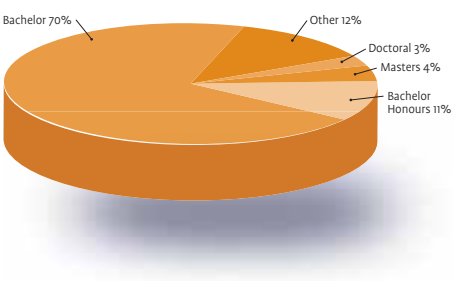
Enrolments at 30 April 2009 totalled 14,133 EFTS. This was 5.4% up on the corresponding time last year. (Domestic enrolments were +5.5%; International (full fee) enrolments +4.3%.)

EFTS increases for the University's five Colleges and School of Law (at 30 April 2009) were:

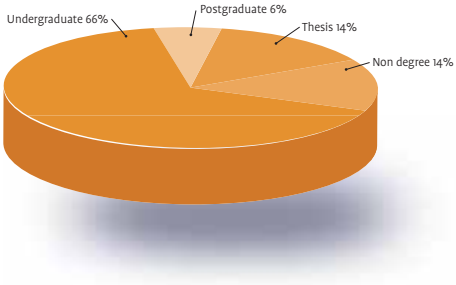
- Arts +3.8% on the same time last year
- Business and Economics +3.3% on the same time last year
- Education +6.0% on the same time last year
- Engineering +4.0% on the same time last year
- Science +8.7% on the same time last year
- Law +1.0% on the same time last year

1 Headcount, excluding Continuing and Bridging Education (formerly known as UC Opportunity) students as at 30 April 2009
2 EFTStudents Returned to the Ministry of Education

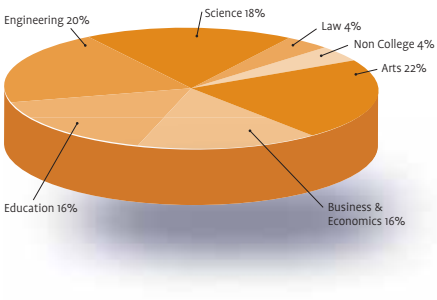
Enrolment Level of EFTStudents



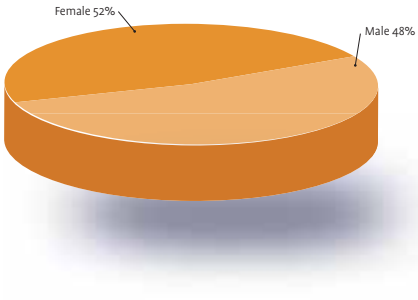
Enrolment Status International EFTS



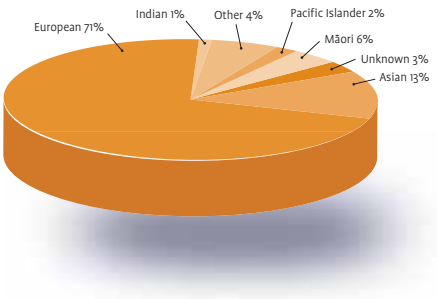
EFTS by College



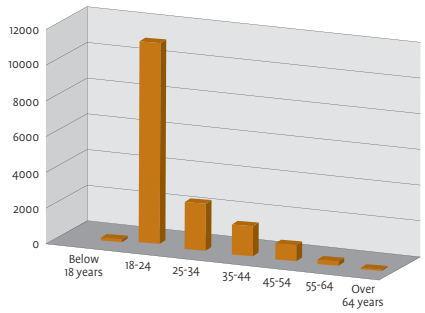
Gender of Students



Ethnicity of EFT Students



Age of EFT Students



National ICT Innovation Institute opens

The NZi3 National ICT Innovation Institute, based at the University of Canterbury, opened in April with the new purpose-built facility being recognised as the most environmentally-friendly educational building in the country.

Prime Minister John Key was the official guest at April's opening event. He was joined by other government representatives, senior representatives of the Institute's founding partners — Hewlett-Packard, IBM, Jade Software Corporation and Tait Electronics — and other stakeholders.

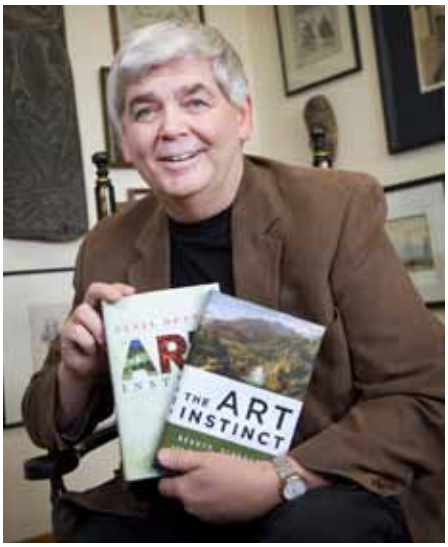
Mr Key said Christchurch's reputation as a hub of innovation in New Zealand would be cemented by the establishment of NZi3. He said economies benefitted from partnerships between universities and industry. The New Zealand Government awarded the University of Canterbury $9.7 million for the development of NZi3 through its Partnerships for Excellence programme, on the proviso that it secured matching funding from the private sector.

Among the researchers based at NZi3 is PhD student John Stowers (above) who is working on the development of vision for the control and navigation of unpiloted aerial vehicles.

Kayak paddle powers UC students to prestigious medal

For the second year running, engineering students from the University of Canterbury have been awarded the Ray Meyer Medal for Excellence in Student Design.

Seven-year old cellist Joo Kim performs at a concert for Professor Barrie Pettman.



Professor Denis Dutton with copies of his new book, The Art Instinct.

Dr Michael Kingan (front) looks at a wind machine blade with research engineer Brian Donohue (back left) and Dr John Pearse.

The medal is awarded to a student or group of students who present the best final-year design project as part of an IPENZ-accredited qualification.

Daniel Barry, Sam Horgan, Kim Hedley and Mathew Pottinger won the medal with PowerBlade, an instrumented kayak paddle.

The UC students developed a system capable of measuring and analysing the performance of a kayak paddler. The system had to be unobtrusive and operate during training on the water. The prototype was a completely wireless solution integrating velocity, rotation and force measurements to determine the stroke cadence and power output of a paddler. The data is collected on an onboard laptop and accessed after a training session.

The system was tested on a number of top New Zealand athletes including the 2008 Olympic K2 pair of Mike Walker and Steven Ferguson.

Generous gift hits the right note

Young musical talent will continue to be nourished at the University of Canterbury thanks to a half-million dollar donation from UK-based philanthropist Professor Barrie Pettman.

Professor Pettman and his wife, Maureen, this year agreed to continue supporting the Pettman Junior Academy based at UC's School of Music with a donation of $100,000 a year for a further five years. The money, gifted through the University of Canterbury Foundation, will be used to provide scholarships and cover the cost of running the academy.

The academy, established in 2006 thanks to an earlier donation by the Pettmans, offers tuition to talented young musicians plus frequent performance opportunities, chamber music lessons, masterclasses and lectures. More than 40 students ranging in age from 7 to 17 attend the academy.

New arts book causes stir

Appearing on an American television talk show with Paul McCartney as your warm-up act doesn't sound like an average day for a Canterbury University philosophy professor. But for Professor Denis Dutton (Humanities) that wasn't even the highlight of his recent American book tour.

Professor Dutton launched his book, *The Art Instinct*, in the United States earlier this year and embarked on a month-long publicity tour which included an appearance in New York on *The Colbert Report* in the same episode as the former Beatle. But when asked the highlight of his promotional trip, Professor Dutton said his address at the world headquarters of Internet giant Google in Mountain View, California, stood out.

Human taste in the arts, Professor Dutton argues, are evolutionary traits shaped by Darwinian selection, and art is produced by culture, individuals, and their evolution in a complex interaction.

The book has been reviewed by the *New York Times*, the *Washington Post*, the *Los Angeles Times*, the *New Yorker*, the *Philadelphia Inquirer*, Canada's *National Post*, and other magazines and newspapers.

UC research set to cut noise levels on frosty vineyards

Canterbury University engineers are helping those living close to vineyards sleep a little easier.

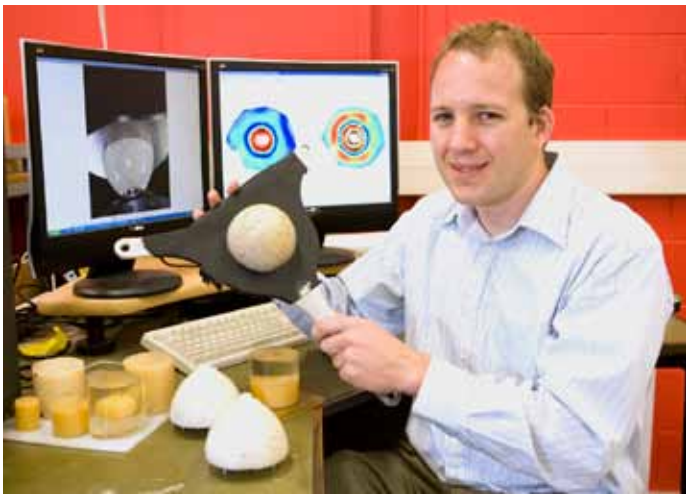
Dr John Pearse and the Acoustics Research Group (Mechanical Engineering) have been developing a new low-noise, high-performance blade to reduce the noise from frost reduction wind machines in vineyards.

Currently, Marlborough company FMR Group Ltd imports wind machines from the US that are placed among vines to help prevent frost at the critical grape bud stage. The wind machines draw down the warmer air above the ground preventing cooler air from settling and causing frost damage.

Dr Pearse and the research group, working with FMR Group, have come up with a prototype blade that reduces the noise by 10 decibels. The new six-metre blade is much wider and has a more aerodynamic shape compared with the aluminium blades of the same length currently used. The new blades are constructed from composites.

UC leads the way in teaching supercomputing

The University of Canterbury, the first institution in the southern hemisphere to have an IBM Blue Gene supercomputer, is the first tertiary institution in Australasia to teach high-performance computing.



Dr Thomas Lotz hopes to develop better breast cancer screening technology.

Edna Waddell Scholarship recipients Anna Fields (left) and Laura King.

"This development shows UC to be at the forefront of high-performance computing in New Zealand and reflects our recognition that 21st century students need 21st century skills," said Professor Tim David, Director of the Centre for Bioengineering, in the Department of Mechanical Engineering.

"Canterbury is the only university in the country to have high-performance computing in its curriculum."

The course provides students with an understanding of the different types of parallel computer architectures that are used in computational science and engineering disciplines to solve complex problems.

US honour for Canterbury human-animal relationship course

A University of Canterbury course examining the representation of animals and human-animal relations in American popular culture has received a distinguished award from the Humane Society of the United States (HSUS).

From Bambi to Kong, taught by Dr Annie Potts (Culture, Literature and Society), received the 2008 Distinguished Established Course Award.

The awards, now in their 10th year, recognise academic excellence in college and university courses that explore the relationships between animals and people.

From Bambi to Kong covers a range of topics including the representation of human-animal relationships in cinema and television, the environmental movement and eco-tourism, and cultural practices such as hunting, pet-keeping, factory farming and zoos.

Breast screening technology wins researcher a postdoctoral fellowship

University of Canterbury researcher Dr Thomas Lotz (Centre for Bioengineering) has been recognised as one of New Zealand's brightest for his investigation into better breast cancer screening technology.

Dr Lotz received a Foundation for Research, Science and Technology Postdoctoral Fellowship valued at $261,844 over three years. He was one of 12 researchers in New Zealand to receive a fellowship, which is designed to foster the development of New Zealand's emerging and future science leaders.

Dr Lotz is researching Digital Imaging-based Elasto-Tomography (DIET) breast cancer screening technology. DIET is a new technology being developed at Canterbury University that relies on digital imaging of the surface of a breast during induced vibrations to derive mechanical properties of the breast tissue. The underlying concept is that the motion seen on the breast's surface differs depending on the stiffness of the tissue within the breast.

As cancerous tissue is 5 to 15 times stiffer than healthy tissue, a characteristic surface motion can be related to a potentially cancerous inclusion.

BNZ lends support for new professorship

The University of Canterbury has officially launched a new professorial chair sponsored by the Bank of New Zealand (BNZ).

The bank is providing sponsorship of $100,000 per year for three years for the BNZ Chair in Finance.

Professor Glenn Boyle is the inaugural BNZ Chair of Finance. He has previously been assistant professor of finance at Louisiana State University (1987-1990), professor of finance at Otago University (1991-2004), and executive director of the NZ Institute for the Study of Competition and Regulation (2004-2008).

The partnership with BNZ will assist the University to develop a centre for financial excellence and the bank will facilitate the transfer of this knowledge into everyday business practice of the bank and its customers.

Scholarships vindicate pair's move into engineering

First-year Canterbury University engineering students Anna Fields and Laura King are two of the inaugural recipients of the Edna Waddell Undergraduate Scholarships for Women in Technology and Engineering.

Three of the national awards, worth $5000 towards first-year study, were on offer in 2009 to encourage wider participation by women in the technological professions.

Anna also won an IPENZ Foundation Scholarship worth $5000 and a UC Emerging Leaders Women in Engineering Award worth $5000 which was presented at this year's UC Scholarships evening.

Laura also came up trumps in the scholarship department. As Dux of Southland Girls High School in 2008 she received a UC Dux Scholarship worth $5000 at the UC Scholarship Awards event and was also awarded a New Zealand Aluminium Smelters Tertiary Education Scholarship.