

CREATIVE ANALYTICAL INNOVATIVE GLOBAL COLLABORATIVE GRADUATES

How universities are producing the
workforce Canada needs



 AUCC

Association of Universities and Colleges of Canada
Association des universités et collèges du Canada

Investments in people

Through rich learning and research opportunities, Canada's universities are building a talented and entrepreneurial workforce. Canada's prosperity depends on university graduates and researchers – they drive innovation in all sectors of our economy. Investments by the provincial and federal governments, the private and not-for-profit sectors, as well as universities themselves, enable the development of these highly educated people.



SCHOLARSHIPS

Universities are investing in scholarships to attract the best students from within Canada and around the world. From 1999 to 2009, Canadian universities tripled spending on scholarships, bursaries and prizes for top students from \$470 million to more than \$1.3 billion annually.

1999

\$470 million



2009

\$1.3 billion

Federal and provincial governments invest in university students at all levels. Through the Canada Graduate Scholarships program alone, the three federal granting agencies awarded 1,021 doctoral scholarships and 3,118 master's scholarships in 2010. In addition, 167 Vanier Scholarships for PhD students – valued at \$50,000 a year for three years – are awarded annually. The first 70 Banting Post-Doctoral Fellowships – valued at \$70,000 a year for two years – were awarded in the fall of 2011.

Photo: University of Toronto

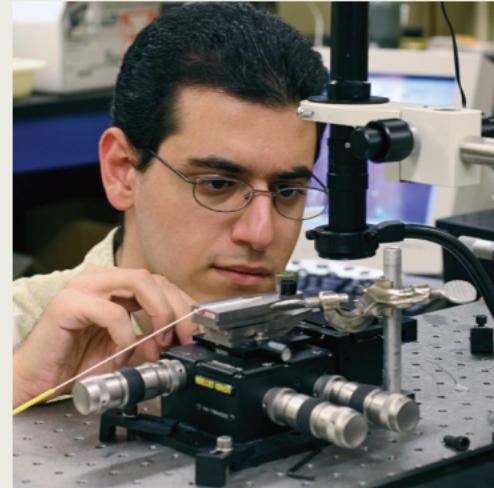


The university difference: Research-enriched learning

Today's universities increasingly integrate teaching and research in a culture of innovation. The research-enriched learning environment on our campuses helps students develop the critical thinking and analytical skills demanded in the knowledge-driven economy. This is how universities are producing Canada's scientists, business leaders, educators and entrepreneurs.

More than half of faculty members at Canada's universities have been hired in the last decade. These professors bring new approaches to learning and research, and often international experience they've gained through their own studies and research partnerships. They're innovative, interdisciplinary, collaborative and open to the world.

Support from the federal government contributes to the strong research environment on our campuses. Federal support for university research through Canada's granting councils doubled from 2000 to 2010. Some of this funding helps to introduce 14,000 undergraduates to groundbreaking research projects and enables some 28,000 graduate students and 5,000 post-doctoral fellows to work on research projects each year.



Photos clockwise from top left: Université Laval, University of Toronto, Université du Québec à Rimouski (Antoine Devouard)

ENGAGING UNDERGRADUATES IN RESEARCH

For undergraduates, increasing opportunities for hands-on research opens new worlds of possibility. As well, faculty research enriches the curriculum and influences teaching approaches. A university education enriched by research creates a culture of inquiry and discovery, and builds enthusiasm for further study.

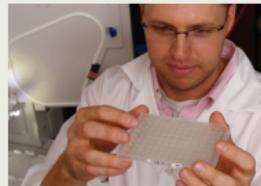
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Nearly nine out of 10 graduating students report experience with faculty research activities.

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Four out of 10 senior year students have done a practicum, internship, field experience, co-op experience or clinical assignment.

Photos from left: Saint Mary's University, Simon Fraser University



RESEARCH-ENRICHED LEARNING

Freedom of speech is one of our most treasured human rights, but some medical conditions can rob people of their ability to talk. University of Toronto engineering student Aakash Sahney, Kevin Tonon, a master's student in computer science and Alex Levy, a U of T alum, are helping patients express themselves again with a new technology called

MyVoice, a smartphone app that aims to replace cumbersome speech-assistance tools for those living with stroke, autism and ALS. The mobile app helps users access words and phrases for everyday situations. It is also linked to the device's GPS system, so it suggests words that are related to a user's location, such as a doctor's office or café.

GRADUATE STUDENTS: THE ENGINE OF UNIVERSITY RESEARCH

In addition to conducting their own independent research, Canada's graduate students are involved in research teams with faculty. By working on real-life projects with business partners, students in MBA and other professional graduate programs gain the entrepreneurial and critical-thinking skills that fuel innovation.

PHD GRADUATES STRENGTHEN ALL SECTORS OF ECONOMY

PhD graduates strengthen a country's innovative capabilities. The impact of Canada's PhD graduates is evident in a variety of jobs, in all parts of the economy. Only a third of PhDs stay in academe, while the remaining two-thirds can be found throughout the economy. In some fields – such as physical and life sciences, architecture, engineering, agriculture, natural resources, conservation and health – fewer than 20 percent of PhD graduates work as university professors. The earnings of PhD degree holders employed outside of academe are impressive. PhDs in management and health-related occupations have annual average earnings over \$130,000.

PhD graduates work in all sectors of the economy (Age 25-64, worked full year, full-time)

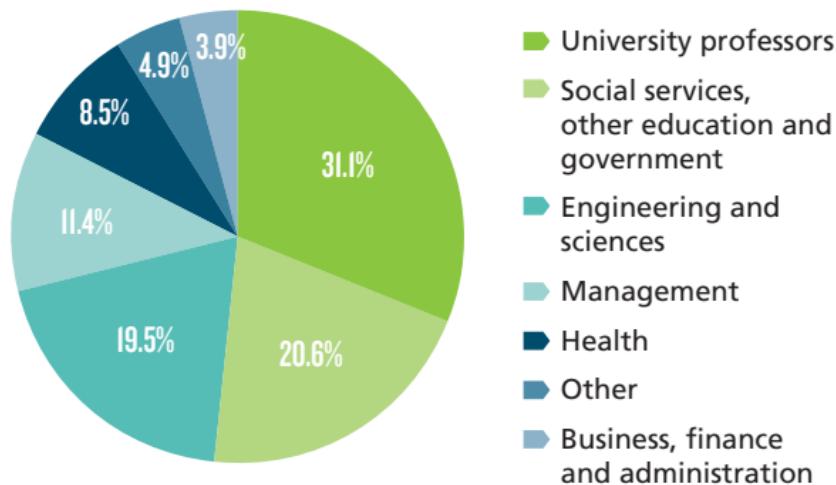




Photo: Queen's University

CANADA IS A MAGNET FOR TALENT

Canada's economic prosperity depends not only on cultivating skills and talent within Canada, but also on attracting the best minds from around the world. Federal research funding helps universities attract leading researchers and innovators to Canada.

Our country is becoming an education destination of choice for international students. In September 2011, 100,000 international students enrolled at Canadian universities, attracted by our reputation for quality education, diverse opportunities and a safe and secure environment. Their presence enriches the learning experience for all students. Many international students return home after graduation and help build links with Canadian business and the public sector. Others stay and play key roles in our economy – including as scientists, entrepreneurs and innovators.



POLAR MOBILE

Before graduating from the University of Waterloo in 2008 with a bachelor of software engineering, Kunal Gupta and a handful of other students founded Polar Mobile, a company whose vision is "to transform the media industry with software." Polar Mobile works with media companies and sports organizations

to build mobile apps for use on smartphones and tablets. Mr. Gupta and his colleagues now have more than 200 clients in 10 countries, and the company continues to grow as the mobile market expands.

The university-to-business talent connection

University graduates' knowledge of current research, their capacity to solve complex problems and ability to acquire and utilize knowledge in new and innovative ways make them extremely valuable to employers. As a result, the average income of bachelor's graduates is far higher than for those with less education. The income levels of professional, master's and PhD graduates of Canadian universities are higher still, leading to significant lifetime earning advantages.

Students recognize the many benefits of a university education and are enrolling in record numbers. In the fall of 2011, undergraduate enrolment at universities topped the one million mark for the first time.

EARNING ADVANTAGES		
Level of education	Average annual earnings (2005)	Accumulated income advantage over high school graduates over 40 years from age 25-to-64
High school certificate or equivalent	\$41,200	Baseline comparator
Trades certificate or diploma	\$40,600	\$(70,000)
Registered Apprenticeship certificate	\$51,000	\$340,000
Total College or CEGEP	\$48,200	\$280,000
Bachelor's degree (s) (including LL.B.)	\$71,300	\$1,320,000
Master's degree (s)	\$89,000	\$1,800,000
Earned doctorate	\$94,200	\$1,830,000
Medical, dental, veterinary medicine or optometry	\$151,600	\$4,260,000

Source: Statistics Canada, 2006 Census of Population

According to the Canadian Chamber of Commerce, higher education funding has one of the biggest payoffs of any government investment targeting economic growth. Other organizations, such as the OECD, Canada's Expert Review Panel on Research and Development, and the Science, Technology and Innovation Council, have highlighted the importance of university graduates as the basis for innovation. All agree on the value of strong connections between academia and the private sector to improve Canada's innovative capabilities now, and in the future.

“By bringing all these students together and giving them the opportunity to build something, create something, invent something for the benefit of society, we’re developing entrepreneurs at a younger age and proving that things can really happen.”

**Paul Godfrey, President and CEO, Postmedia Network
Speaking about Ryerson University’s Digital Media Zone**

The Association of Universities and Colleges of Canada is the voice of Canada's universities.

AUCC represents 95 Canadian public and private not-for-profit universities and university-degree level colleges.

www.aucc.ca

Photo: Université du Québec à Montréal