

# CANADIAN UNIVERSITY REPORT

THE GLOBE AND MAIL 

**TENTH  
ANNIVERSARY  
EDITION**

**WORKING  
KNOWLEDGE**  
Insights on how  
to tailor your  
program to the  
career you want

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**THE RESULTS  
ARE IN**  
Our exclusive  
student survey  
now grades 60  
schools



## **THINGS WE LOVE ABOUT UNIVERSITY**

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**2012**

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# CANADIAN UNIVERSITY REPORT 2012

Presented by *The Globe and Mail* in partnership with Higher Education Strategy Associates

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PHOTOGRAPH EUGEN SAKHNENKO



## Ten years on campus

Universities in Canada seem to be forever under fire these days: They are too expensive, they are too vocational, they are not vocational enough, they are too obsessed with research kudos, they are too generalist—and then there's the hottest topic of all: that a BA no longer gets you ahead in life.

While there's some truth in many of these points—because universities are as flawed as any large public institution—they overlook the fact that they are also multi-faceted, complicated bodies that serve many different masters. In Canada, they have to pander to the whims of whoever holds political power in the provinces and Ottawa; they are strictly limited in what they can charge for services; there's always the heady campus brew of faculty, unions and senates jostling for influence over decision-making; and then of course, the institutions are obliged to satisfy their paying customers—not least when publications such as this keep banging the drum about improving the student experience, surveying more than 33,000 undergraduates every year to keep universities' feet to the fire.

Today, we celebrate our tenth issue. It's been a long journey since 2002, when

what was then the University Report Card published Canada's first comprehensive survey of undergraduate satisfaction in collaboration with research firm The Strategic Counsel. Our current survey partner, Higher Education Strategy Associates' Alex Usher, describes this journey on page 75 of this magazine.

For our cover story two years ago, we asked whether university was even worth it. We hope we made it clear that, all things considered, it was; and to celebrate our tenth birthday this year, we thought we'd emphasize the point. To that end, we have selected 10 things that go toward making a university education indispensable.

While we should never pretend that universities do everything well—you will find ample evidence to the contrary in the results from this year's student survey, starting on page 75—we feel our anniversary edition is a perfect time to celebrate everything that is good on campus. For the fraction of the price of universities in say, the U.S. or Britain, Canadian schools provide an excellent experience. Great things happen when students meet teachers who inspire them to learn and harness their creativity; make friends or discover extracurricular activities that spark a new passion; when their campus life nudges them into a career that matches their goals, not their parents'; or when they feel so comfortable with their peers and the physical spaces that they know they've chosen a campus that is right for them.

That final feel-good factor has always been the guiding principle behind this magazine: to help applicants make the right choice. For those that do, university holds endless opportunities.

**SIMON BECK**

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As Wilfrid Laurier University marks a century of progress and innovation, we also look ahead to the world's new social, economic and environmental challenges. Our students, faculty, staff and alumni will tackle these issues as they always have – as a community of integrated and engaged learners with increasing partnerships around the world. Inspired by those who came before us, we believe in the transformative power of education and research, and we look forward to a future full of promise.

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# BIRTHDAY THOUGHTS FROM THE TOP

To mark a decade of our annual undergraduate satisfaction survey, we asked university presidents to give us their candid opinions of our report



**STEPHEN TOOPE**  
University of British Columbia

Students have seen a growth in the number of efforts to evaluate and rank universities both in Canada and internationally. I want to acknowledge the 10th anniversary of the *Globe and Mail's Canadian University Report (CUR)*, which aims to be a resource for university-bound students by offering helpful articles and conveying student experience data.

CUR offers students one helpful resource among several that they can use to make crucial decisions about institutional fit. The process is different for each person and the CUR Campus Navigator tool, which allows students to select their own criteria, is an interesting effort to recognize that complexity. We know that the key to selecting a university is to find a good fit between the student and the institution in all aspects of university life. I see resources such as CUR as one more tool available to prospective students in obtaining as complete a picture as possible, along with campus visits, academic advising, discussion with students, faculty, and staff, and use of the vast resources provided by the universities themselves.

CUR is part of a trend that has helped bring to the fore the importance of the student experience. The University of British Columbia's strategic plan places considerable emphasis on enriching the undergraduate experience, and draws upon the comprehensive National Survey of Student Engagement, and the associated

research on "High Impact Undergraduate Experiences," to substantially change the nature of undergraduate education. This has been important to me, and it is why UBC has taken steps to improve teaching and learning, and is encouraging the growth of activities like community service learning, co-op education, undergraduate research, study abroad programs and integrated learning. We have set a goal to provide all students with at least two such enriched educational experiences during the course of their studies.

I welcome the *Canadian University Report* for its part in helping shine a light on Canadian universities.

**DANIEL WOOLF**  
Queen's University



Over the last 10 years, *The Globe and Mail's* university report has become a prominent annual 'go-to' for many prospective and current undergraduate university students.

What I like about the survey is that it's student-based. Most university "rankings" focus primarily or even exclusively on research and apply a one-size-fits-all model. *The Globe's* report presents a distinctly student-based perspective, and to its credit, does not attempt an overall ranking. It presents student assessments on an issue-by-issue basis—from classrooms to food services to libraries to athletics and recreation—and gives readers a real glimpse into the life of the university.

The views of students who study, learn, live and grow at Queen's are essential to

us. We strive to be a "balanced academy" that delivers to students the benefits of our extensive research activity, our focus on teaching and our unique learning and living experience.

*The Globe's* approach allows our students to talk about many of the important facets of their university experience and presents their views fairly, honestly and openly.

**INDIRA SAMARASEKERA**  
University of Alberta



Understanding student concerns and seeking student input on a number of fronts is key to ensuring our students have a quality experience, so we welcome student surveys. We are, however, hopeful that *The Globe and Mail* (and others) will broaden the objectivity of student assessments so that it produces results that are truly reflective of the contributions universities make in producing engaged citizens and making prosperous and secure societies locally, nationally and internationally.

Specifically, it would be useful to see student assessment teams travelling to universities across Canada to do comparisons of facilities and services—each student is only able to speak to his or her own experience but a research team would be able to draw comparisons among Canadian universities that would be meaningful and useful for the readers of the *Canadian University Report*.



**AMIT CHAKMA**  
University of Western Ontario

Over the past decade, the *Canadian University Report* has become an important source of information for prospective students, parents, university administrators and others who have a stake in the present and future of post-secondary education. In academic research, we consider peer-reviewed studies to be among the most relevant. Similarly, a survey that allows students to review their university experience provides a valuable measure for prospective students contemplating one of the biggest decisions of their lives.

In our information-rich society, simplifying assessments into "Top-10" or "Best of" lists—particularly for organizations as complex as universities—does not always give readers sufficient context when weighing the merits of different institutions. Universities are as unique as the individuals contemplating their post-secondary education and one size does not fit all. However, for the schools being reviewed, the *Canadian University Report* has indeed helped us define and concentrate our efforts for improving areas of campus life that students appear to value most.

All universities focus on providing highly challenging and rewarding academic programs within an environment that is attractive and enriching to those who place their trust in us to deliver the best educational experience possible. At Western, our students have consistently voiced a very high degree of satisfaction with many of the aspects measured in the *Canadian*

*University Report*. We take pride in these achievements, but we are not resting on our laurels. Rather, we are building on the reputation we have earned for providing an outstanding student experience to expand the impact and profile of our teaching and research on the global stage.

**DAVID NAYLOR**  
University of Toronto



The past decade has seen an ever-increasing appetite among parents and students for information and analysis related to higher education. Many organizations are responding to this demand, but the *Globe's* survey offers insights into areas other organizations do not address. Notable among these are items that matter to students' on-campus experience, such as food services, residences, and buildings and facilities.

However, our general approach is to look for consistency of responses across related surveys. This year, for example, we participated in the National Survey of Student Engagement (NSSE) for the fourth time since 2004. NSSE surveys every first-year and fourth-year student at the University of Toronto. The response in 2011 was about 40% or almost 27,000 students. (The latest *Globe* results are based on the opinions

of roughly 2,500 students). We are very encouraged that the most recent NSSE results reveal a much better student experience and improvement in the full range of areas measured at U of T.

In short, by combining broad student perceptions from NSSE with the focused feedback on student services from the *Globe* survey, we are able to allocate our scarce resources more wisely and give students an even better experience in future.



**ROBERT CAMPBELL**  
Mount Allison University

Mount Allison focuses on the individual student by providing an immersive learning community. We strive to provide an environment that encourages students to learn, think and understand their world by engaging with each other, their professors and the wider world. This experience is unique in Canada and the *Canadian University Report (CUR)* effectively captures our distinct experience by measuring student opinion. Secondly, because CUR reports on a wide range of student experiences—from academic through extracurricular and residence life, the survey reflects the complexity and range of our students' immersive experiences. As a result, the CUR surveys have provided us with valuable, reflective data that we review in a serious and consequential way. We believe that the survey results project to our existing and prospective students—as well as staff, alumni, parents, and public officials—how we are doing. We look forward to the next decade of *Canadian University Reports*.

PHOTOGRAPHS: (TOOPE) JOHN LEHMANN/THE GLOBE AND MAIL; (SAMARASEKERA) JAN JACKSON/THE GLOBE AND MAIL; (CHAKMA) KEVIN VAN PASSEN/THE GLOBE AND MAIL; (NAYLOR) PHILIP CHEUNG/THE GLOBE AND MAIL; (CAMPBELL) DANIEL ST. LOUIS



“This is the  
**future** and  
I’m part  
of it.”

Kimberly Gulevich,  
in UNBC’s bioenergy plant

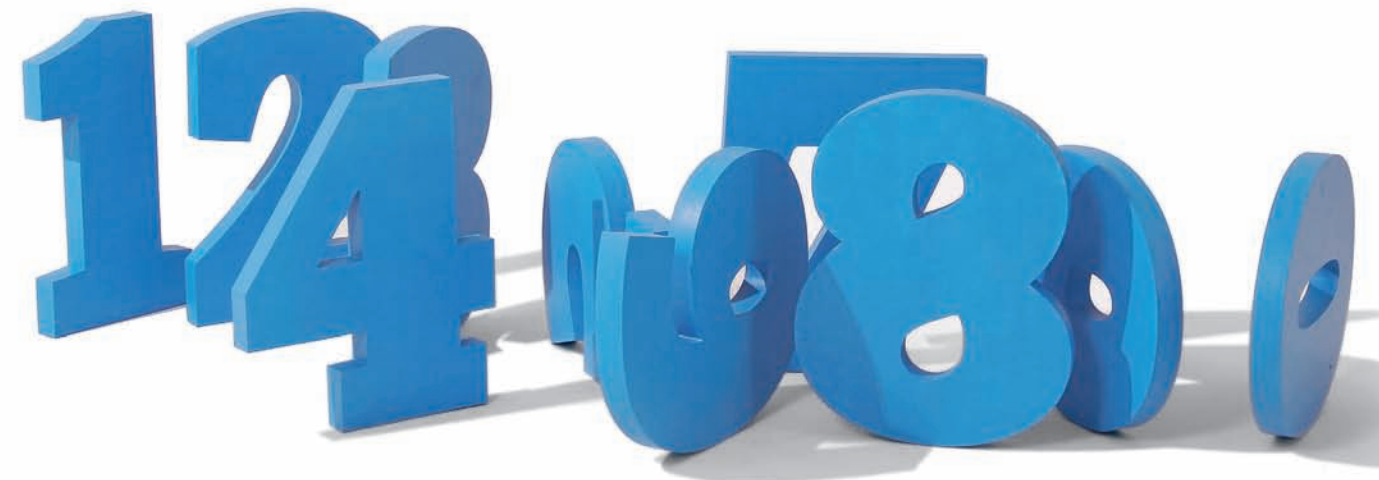


CANADA'S  
**GREEN**  
UNIVERSITY™

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# 10 THINGS WE LOVE ABOUT UNIVERSITY

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*There’s a lot more to university than a piece of paper declaring you a bachelor of arts, science, commerce or engineering. The degree matters, but more importantly, these three or four years could—and should—be the best of your life.*

*University marks the transition from adolescence to adulthood and from dependence to independence; it’s the perfect environment for growth, whether you’re ambitious and career-driven, an academic dynamo or haven’t the slightest clue what you want to do with your life.*

*It’s an opportunity that is, simply, just too good to waste. And to mark our tenth year, we at the Canadian University Report have singled out 10 aspects of university life in Canada that will help you put into perspective what it’s all about. You’ll discover, among other things, why university (as expensive as a degree might seem) is cheap at the price; how freshman year is the perfect stepping stone to adulthood; why extracurricular activities and the campus environment will expand your mind and possibly change your life; how easy it is to find the school that suits you best; and how you can find academic fulfillment in the classroom.*

**Photographs by Andrew B. Myers**

## IT'S A BARGAIN

*Tuition is too high in Canada, right? Actually, no. Our universities offer top-flight education on the cheap, compared to global competitors*

BY ERIN MILLAR



As soon as Talia Varoglu first stepped foot on the University of British Columbia campus two summers ago, she fell in love. She pictured herself devouring literature on UBC's sprawling grounds, exploring beaches and mountains and pursuing her favourite hobby, horseback riding, at nearby stables. Vancouver seemed a world apart from her hometown in Colorado where she was about to start Grade 12. Wisely, her parents scheduled a second campus tour in January 2011, so that she experienced Vancouver at its worst (and wettest). But for Varoglu, the trip was a mere formality; she was so set on UBC, she didn't apply to any other school.

That UBC offered high-quality education at what for Americans is a cut-rate price was the icing on the cake. Even with international student fees (which, at \$22,000 a year, are nearly five times higher than what domestic students are charged), first-year arts student Varoglu paid around the same amount as her older brother who enrolled in his home state at the University of Colorado in Boulder.

Intellectually ambitious and with strong high-school marks, Varoglu wanted the academic challenge of attending a leading school but didn't want to go to an exclusive liberal arts college with its somewhat homogeneous student body. For a fraction of the tuition, UBC offered her an education that consistently ranked among the top three in Canada and top 40 in the world. "Whenever I tell my [Canadian] friends what I'm paying, they are shocked at how expensive it is for international students," she says. "But UBC is actually a total bargain."

Although it may not seem like it to those students and parents who have just finished digging deep into their pockets to pay this semester's tuition, Varoglu has a point. When compared to countries around the world, postsecondary education in Canada is a great value. Not only is tuition here dirt cheap compared to American, Japanese or British schools, but the quality of education delivered by Canada's publicly-funded universities is consistently excellent.

However, cheap tuition doesn't necessarily guarantee quality education. Policy makers have long debated this tricky balancing act. Charge too much tuition and higher education becomes inaccessible for low-income students; charge too little and resource-starved schools struggle to maintain quality. "If you look at what our universities actually spend per student, the value is extraordinary," says Alex Usher, president of the consulting firm Higher Education Strategy Associates. According to a September report from the Organization for Economic Co-operation and Development (OECD), Canada spends more than \$20,000 (U.S.) a year on each post-secondary student, 50% above the OECD average, ranking us third among OECD countries in per-student expenditures after the United States and Switzerland.

Of course, tuition isn't the only expense students struggle to pay. Sarah Klain, a master's student in environmental science at UBC, was shocked by the cost of living when she moved to Vancouver from Salmouth, Maine. But after crunching the numbers, she came to the conclusion that Canada's affordable tuition and health care made up for more expensive groceries. She estimates that she would have needed a \$50,000 loan to go to graduate school at the University of California, Santa Barbara.

Canada's generous financial aid programs, such as the Canada Grant Program and student loans, also make education here a steal. "We have to remember that although we charge everyone tuition up front, a lot of that is given back right away in tax rebates," says Usher, noting that tax credits range from 20% to 30% of tuition depending on the province.

Financial aid was a significant contributing factor to Klain's decision to study in Canada. Scholarship programs designed to attract talented graduate students allowed her to access funding she may not have received in the United States. As an international student, she

## HOW TO GRADUATE (NEARLY) DEBT-FREE

Forget about tuition and the cost of books—the hidden cost of a university education doesn't start adding up until after convocation, when student-loan interest kicks in. Take for example Jack, who graduated with \$20,000 in student loan debt. His friend Jill racked up \$30,000 in debt. After graduating they both scored decent jobs and were able to pay \$4,000 annually against their loans. But because the government began charging 10% interest as soon as they graduated, it took Jack seven years to pay off his \$20,000 in principal, which cost him an additional \$9,128 in interest. Jill who only borrowed \$10,000 more than Jack made loan payments for more than twice as long as he did and forked over \$28,228 in interest.

Here are 10 tips for minimizing student loan debt:

- 1. Start saving early** Ask your parents if they have contributed to a RESP. Put aside a portion from your summer job income—saving even \$500 can save you hundreds in interest.
- 2. Consider alternatives** Can you start your degree at a college where tuition is usually cheaper? Is there a school closer to home so you can live with your parents for the first year or two?
- 3. Plan your education carefully** Over 50% of undergrads change their major or university. Plan ahead so you don't end up paying for unnecessary classes.
- 4. Maximize awards** Research scholarships and bursaries, keep an organized application folder containing essays, references and your résumé and apply for as many awards as possible.
- 5. Create a reasonable budget** Monthly budgets will help you make informed choices about your expenses. But make it realistic; if you pledge never to spend a dime on going out for a beer or other indulgences you're sure to blow the budget.
- 6. Save on textbooks** Hit up cheaper alternatives to the campus bookstore such as online sellers, used book stores, libraries, friends, or your student union. Some unis even rent textbooks.
- 7. Work part-time** Ask around campus about student-friendly jobs or look for casual gigs like tutoring.
- 8. Quit your car** Most universities offer cheap transit deals. The reality is that cars might be meant for people richer than you.
- 9. Learn about cash flow** Avoid wasting money on credit-card interest, phone-bill penalties, or tuition late-fees by understanding your flow of expenses and income.
- 10. Be a stingy gourmet** Working on your cooking skills can save you loads of money. Experiment on cheap dishes and bring leftovers to school to avoid pricey cafeteria lunches.

isn't eligible for research funding through the federal research funding bodies, but she was offered funding from UBC and private fellowships. When discounts to tuition such as student loans, need-based grants, scholarships and tax breaks are taken into consideration, Canada starts to look even more affordable. In a ranking of the education affordability in 15 countries authored by Usher and his colleague Jon Medow, Canada rose to seventh place once indirect subsidies were included. "When it comes to affordability, we are solidly in the middle of the pack," says Usher. "But we can hold our head up high because the quality is there. We may be one of the best-funded public education systems in the world, up there with the Scandinavians."

For Olivia Freeman, it was Canada or bust. Without the luxury of über-rich parents, the Washington-state native simply couldn't afford to go to college in the U.S. "I quickly realized that UBC and Simon Fraser University were my only financially viable options," she says. Like Varoglu, she believes she has gotten great value for her tuition dollars at UBC.

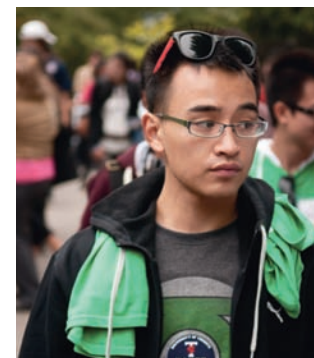
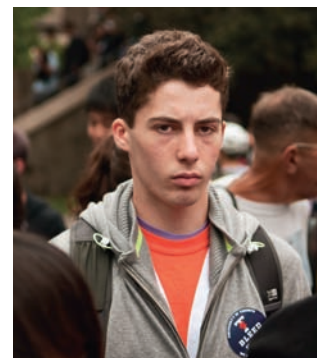
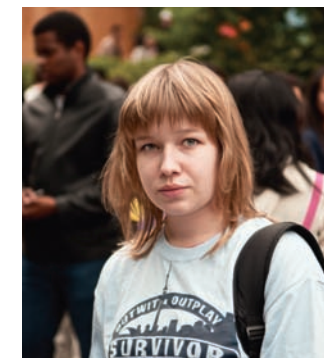
The aim of the relatively affordable Canadian system is accessibility. By contrast, the U.S. has approached the accessibility challenge by offering postsecondary education at various price-points, from the exclusive \$50,000 a year liberal arts college to the much cheaper state university. "But the problem is, of course, that when you provide different price points, you also get different quality points," says Usher. Canada, for the most part, offers high quality across all of its publicly-funded institutions. "This makes us genuinely open, not exclusive." Klain has experienced UBC's openness firsthand through the diverse student body. Having completed her undergraduate degree at the prestigious Reed College in Portland, Oregon, she noticed immediately how her new classmates differed from her former college peers. "Half of the students at Reed College were on financial aid, like me, and the other half came from extremely wealthy families," she explains. "At UBC, I'm exposed to a much more diverse group of students and it's really positive. It has contributed so much to my thinking."

PHOTOGRAPH THOMAS BARWICK/GETTY IMAGES

# FRESHMAN YEAR IS ONE BIG SUPPORT GROUP

*It's time to grow up: First year on campus provides everything students need to ease their transition into adulthood*

BY ERIN MILLAR Photographs by Eugen Sakhnenko

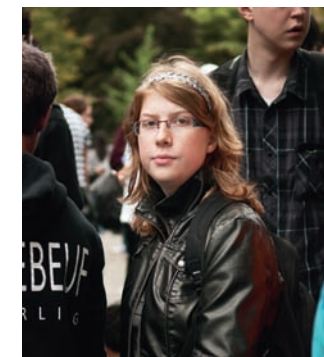
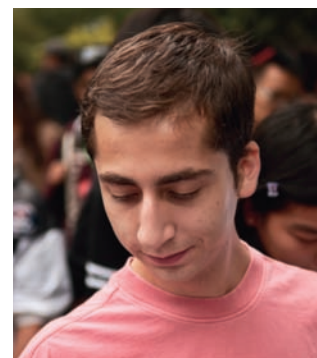


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hen Ashley Margeson graduated from high school, she was nervous about leaving her family home for her new life as an undergraduate at Acadia University in Wolfville, Nova Scotia. She didn't know how to live on her own, manage a household or stick to a budget. "I had no idea what I was doing," she says. However, within weeks of moving into residence, Margeson's fears had largely abated. She found that she was part of a community of 100 other students, which included residence advisers who could help her deal with any difficult issue. "Residence was definitely the place I wanted to be," she recalls. "It felt like a home, not just a place to sleep."

This May, almost three years after she first arrived at Acadia, the fourth-year nutrition-science student moved into an apartment off-campus. Margeson's experience living in residence—she eventually became a residence advisor—taught her to be aware of how her actions affect others, how to resolve conflicts, and, most importantly, the value of knowing her neighbours. "I don't think I could be pulling this off without first living in residence," she says, adding that "everyone should live at least one year in residence. You learn so much about yourself." Her sentiment can be applied to undergraduate life in general. With so many support services, opportunities and mentors, university is a safe place to make the transition from high school to adulthood.

For example, students can access co-operative education programs, which provide an intermediate step between the academic world and full-time employment. Daniel Finnis, a third-year engineering student at Simon Fraser University in British Columbia has participated in co-ops at three different companies. He worked at B.C.-based Surrey Fluid Power (a manufacturer of hydraulic parts). He then programmed a computer system to control vehicle headlights for Mercedes in Stuttgart, Germany. And, most recently, he was a software tester at LMI Systems in Delta, British Columbia. "Co-op is a chance to test-drive potential



careers,” Finnis says. “I learned about what I enjoy doing, and the jobs I don’t want.” While in Stuttgart, Finnis learned how to work with workers who spoke a different language than he did and realized the value of being flexible. He also learned how to deal with different management styles and, more importantly, recognize employers that don’t suit him. Co-op is about more than acquiring soft skills, of course. Finnis gained valuable contacts and experience that will help him find employment when he graduates.

The key to these type of programs is that universities provide the infrastructure and support for students to try something new or apply their education in a relatively low-risk environment. “As soon as students enter postsecondary education, they take on a lot of responsibility,” says James Sanford, senior director of student services at Acadia University. “It starts in the classroom with higher academic expectations and then stretches into everything from extracurricular activities to personal health.”

University students navigating these new challenges are never alone. Counselling and academic services are there to help them as



they learn to manage schedules, deal with stress and academic pressures, organize busy social lives and more. Support systems are not designed to bail students out but they do make universities more forgiving. “We want to help students learn to identify what they’re feeling, how they’re doing, so they know when and how to access what they need,” says Sanford. “When they move on, they will take those skills with them. University should instill a sense of confidence and comfort.”

For Margeson, taking advantage of everything university has to offer has accomplished just that. “Getting involved is what helped

me survive first year,” she says, her voice self-assured. As a student at Acadia—a relatively small, undergraduate-focused school—she found that it was almost impossible to be anonymous and that made her feel like she was part of a supportive community. In a student club, she rediscovered her love of dance and now teaches beginner ballet and serves on the club’s executive. She also volunteers along with 250 other Acadia students to mentor children with disabilities. She was also elected to student government. The benefits of all these experiences are hard to measure but Margeson feels that her experiences have prepared her for life outside of university. “I now feel like I can get over any bump in the road because university has thrown so much at me in terms of academics, extracurriculars, social life,” Margeson says. “You can’t figure out how to do something differently until you’ve made mistakes, and I’ve been lucky enough to be in a place where I could make mistakes.” She adds, “I tell new students I meet that university isn’t all about books. Push yourself out of your comfort zone because there will always be someone there to catch you.”

## 10 THINGS WE LOVE

# YOU’RE SPOILED FOR CHOICE

*It’s hard to find a bad Canadian university—and it’s easy to find one in a niche that matches your needs. Here’s a selective guide to the types of school our nation has to offer*

Illustrations by **Tanya Lam**



## IVY LEAGUE

**University of Toronto** Brand power, unrivalled research, grand tradition, college system—all nestled snugly in the big city.

**McGill University** Big name globally, top reputation, attractive campus and who doesn’t want to live in Montreal?

**Queen’s University** Sandstone oasis, Oxbridge ambience, very smart (and occasionally overexcited) students.

**University of Western Ontario** Bucolic campus, high-achieving students and a consistent top performer in the Canadian University Report student survey.

**University of British Columbia** Queen of the West Coast; quality teaching and research—and all of this in beautiful Vancouver.

**University of Alberta** Top reputation for teaching and research, punches above its weight in world rankings.

**University of Waterloo** Co-op pioneer, bustling tech-hub setting, grads highly prized by Bill Gates et al.

**McMaster University** Handsome Hamilton campus with a grand tradition of interdisciplinary education and outstanding research.



The University of New South Wales (UNSW) is one of Australia’s leading international universities



- UNSW main campus is located in Sydney, Australia, approximately 15 minutes from the famous Bondi Beach and 20 minutes from the city centre
- Ranked 49th in the world in the 2010 *QS World University Rankings*
- Ranked Australia’s 4th most research-intensive university in the *Excellence in Research for Australia Report*
- A comprehensive teaching and research university offering premium professional programs in business, science, architecture, engineering, medicine, law, arts, social sciences, fine arts and design
- Foundation member of the prestigious Group of Eight Australian leading research universities and active member of Universitas 21, an international alliance of 23 leading universities in 15 countries
- More than 52,000 students including 11,000 international students from over 120 countries are part of the UNSW student cohort

University of New South Wales, Australia  
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**Ryerson University** Making waves by emphasizing its digital-age cred and transforming the landscape around its expanding, downtown Toronto campus.

**Concordia University** Cramped and drab compared to neighbour McGill, but way cooler, boasting some cutting-edge programs.

**York University** Commuter-campus criticisms aside, it boasts best-in-class programs in many humanities and science fields.

**University of Winnipeg** Yes, we know what you're thinking, but president Lloyd Axworthy is thinking big and increasing the school's relevance.



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**Dalhousie, New Brunswick, Manitoba, Saskatchewan, Memorial, Victoria** and others. Although they largely serve the local community, many boast high-quality and unique programs as well as excellent research facilities.

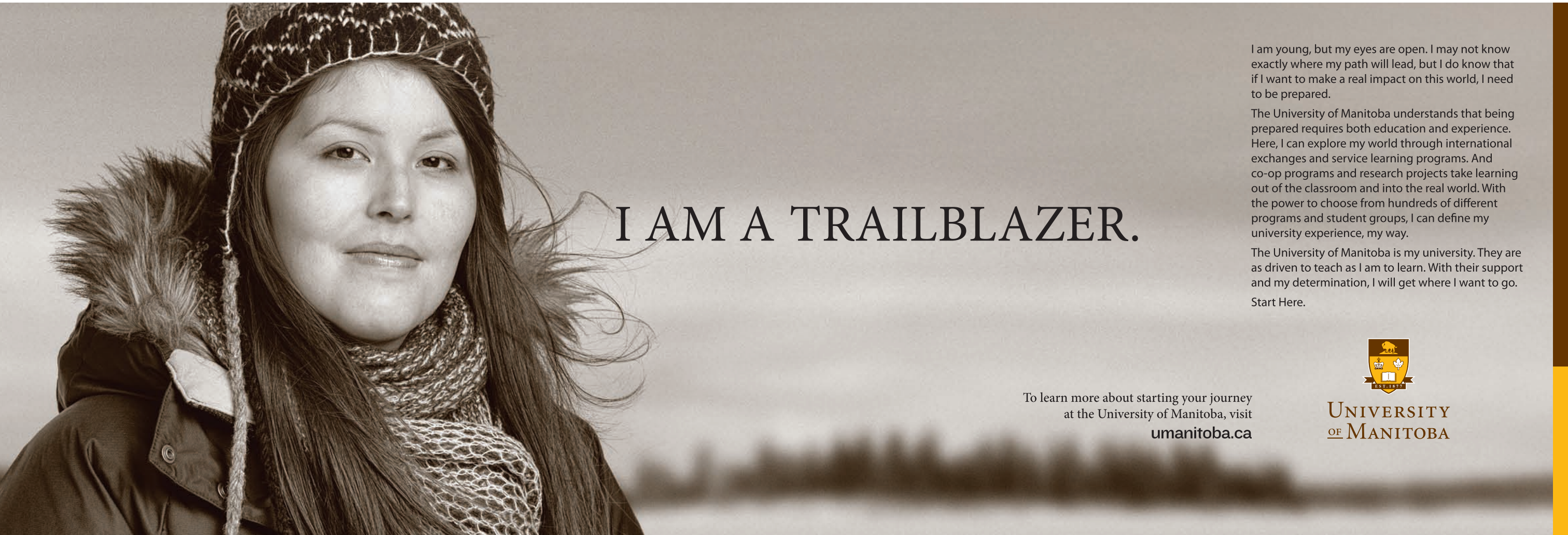


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## PROFS WHO LOVE TO TEACH

*Not all professors hide away in research labs. Respect for a student's learning style, a drive to teach well and a sense of humour are hallmarks of the great ones*

BY EGGLE PROCUTA Photograph by Mark Cohene



### ROLAND STULL

**Professor of Earth and Ocean Sciences, University of British Columbia**

Stull, 61, is a world-renowned expert in numerical weather prediction and also specializes in weather-related disasters in mountainous coastal regions. He has been teaching at UBC for 16 years and, before that, he was a faculty member at the University of Wisconsin. A native of Baltimore, Stull has a bachelor's degree in chemical engineering and a PhD in atmospheric science, both from the University of Washington. In his spare time, he likes to

fly planes and is also a flight instructor.

#### *Why he's good*

Stull has a gift for making science compelling even to those without a background in it. His first-year course, called The Catastrophic Earth: Natural Disasters, has no prerequisites and is a popular choice for non-science majors. Each session draws between 300 and 400 students, half of them female. Every two weeks, Stull brings in a different professor to teach in his or her area of expertise—the topics can include everything from volcanoes to earthquakes. “[The students] enjoy when each of us comes in with our own stories. They see the human side of doing science,” Stull says.

---

**W**hat makes a great professor? A commanding knowledge of their field is a given. But just as key is a passion for students and a respect for the journey these young adults are taking. Some are so devoted to undergraduate teaching that they choose to do it exclusively. Others maintain a commitment to undergrads while carrying out research and graduate-level teaching. A great professor is engaged—and it doesn't matter if his class has 30 students or 300. And while it doesn't necessarily mean they'll go out for beers every Friday night, it does mean that they will be available during their office hours and ready to answer questions. Often, they will have a sense of humour and demonstrate a desire to learn from their students, as much as their students learn from them. And they will have a willingness to change and adapt their teaching and evaluation methods, whether by embracing new technologies or using old-fashioned networking techniques to pick up teaching tips from other colleagues. The four educators we profile here exemplify these qualities and that's why they deserve to be called great profs.

---



## THE FLIPSIDE: RESEARCH OVER TEACHING

Professors should be inspirations and mentors, but far too many students are left disappointed with the person at the front of the lecture hall. In an analysis of 6,000 students as part of the *Canadian University Report* survey last year, one-quarter said their worst academic experience related to a poor professor. This ranged from frustration over a professor's organizational skills, such as inadequate office hours, to poor language or pedagogical skills and rude or mean demeanor. "They are common complaints," says Alex Usher, founding president of Higher Education Strategy Associates, which analyzes the report's survey responses. First year of university can be a huge shock to many students, he says, and "students are looking for contact and sympathy. They just feel lost and are looking for someone to give them a hand." But unfortunately, many of them are not finding this guidance from their professors. And the situation is getting worse, Usher adds.

Part of the problem stems from professors who are too caught up in their research to be committed to their undergraduate teaching responsibilities. But Usher also blames the economics of how Canadian universities are set up. The institutions are rewarded, both financially and through greater prestige, by producing top-level research. So universities admit more undergraduates than they can realistically handle and then skim from those earnings to pay for research going on at the top.

Given the reward structure, Usher doesn't see the overall picture improving anytime soon. However, there are some smaller changes being made to improve undergraduate students' connection to their professors. For instance, the University of Toronto has first-year seminar courses which are limited to 20 students, instead of the more typical 200 or 300. "Hopefully the professors signing up for these seminars are motivated [to build strong relationships with first-year students]," Usher says.

A more systemic change that would be necessary, he adds, is for university administrations to make the connection between overall budgeting and course loads for professors. He says universities are not deliberately hiding the trade-offs, but they are not making them transparent.

### Teaching style

He is an advocate of staying on top of technological innovations that boost the effectiveness of his teaching. Between lectures, students are given online questions about that week's reading assignments, including one that asks what topic gave them the most difficulty. This allows Stull to tailor the next class to respond to how the class is progressing, as opposed to where the syllabus says it should be. During the lecture, students use wireless clickers to respond to multiple-choice questions about the topic they are discussing. "I instantly see whether they get it or not," Stull says. If they're having difficulties, he'll segue into a micro-lecture to clarify them.

### On engaging students

"I love interacting with the students," Stull says, "to see their eyes light up. To see them evolve and mature. To see the joy of learning." He was very keen to take part in the university's Carl Wieman science education initiative, a project launched in 2007 by the Nobel laureate in physics to improve how science is taught to undergraduates. "Although there are many different teaching methods, it's a reality that not all are effective," says Stull. "The best way to tell is to gather a lot of data and to see where the students are learning. The bottom line is to approach scientific teaching scientifically."

## ELIZABETH WELLS Associate Professor in Music History, Mount Allison University

Wells, 46, grew up in Toronto in a family where there was a lot of music and many teachers. After graduating with a BA in music history at the University of Toronto, she worked at a radio station as a classical music programmer. She chose to go back to university to do graduate work in musicology at the Eastman School of Music in Rochester, New York, because she "wanted to go deeper" in her knowledge of the art form. She has been teaching at Mount Allison for 10 years and says that being appointed a National 3M Teaching Fellow in 2010 felt like winning an Oscar.

### Why she's good

Wells has developed a number of cool courses—there's one devoted to The Beatles. Another, Music and Difference, comes with a warning label about the R-rated content.

Wells is part of a growing movement called the scholarship of teaching and learning, which advocates that professors constantly refine their methods of how to engage students. So, for example, instead of a 15% participation grade, Wells now awards students a 15% professionalism grade—a more important benchmark.

### Teaching style

"Because I'm a very organized person, I used to design courses that were very tight, very focused," Wells says. "Now I am much more spontaneous because that's where the real moments of learning happen." Even people who aren't registered in her class drop by because of her gregarious reputation.

### On engaging students

She is empathetic to students who don't feel comfortable speaking in front of others and will tell them a story about a painfully shy woman she knew at university—herself. Students are often impressed and touched by her candour. "The journey from a place of uncertainty to a place at the front of a classroom seems a very long journey indeed," Wells says. It's important for "us to always be mindful, with gratitude, of our students—their journeys, their struggles, their victories, their stories—which are ours as well."

## DEBORAH SCHNITZER Professor of English, University of Winnipeg

Deborah Schnitzer, 61, has been teaching at the University of Winnipeg since 1988. She did an undergraduate degree in English and philosophy at the University of Western Ontario and graduate work at the Universities of Calgary and Manitoba. She is also a published poet and novelist, a filmmaker and a social activist. She is a National 3M Teaching Fellow.

### Why she's good

Schnitzer loves that students in her classes are not just English majors but come from all disciplines. She welcomes the use of multimedia for assignments, "anything that a student conceives of"—be it a quilt, a picture, a music composition, a dance, a video or a sculpture. Schnitzer is a big believer in learning by doing and started a program where students get hands-on experience through university-community partnerships. In one of these practicum courses, students commit themselves to working four to six

hours a week for a non-profit organization, in addition to their time in the classroom. In the second half of the course, they develop a collective community-building class project.

### Teaching style

The first thing Schnitzer does in all of her classes, even if there are dozens of students, is to make a circle with the desks. "In a circle, people can't hide in the back with their laptops," she laughs. Regarding the distraction of iPads and smart phones, she chooses to be upfront from the very beginning and asks the students to make a collective decision about what place the devices have in the classroom. She calls it a bill of rights. "We don't pretend it's not going on. We deal with it with humour, warmth, generosity and authenticity."

### On engaging students

Schnitzer is devoted to undergraduate teaching and says that she found her very first experience dramatic and exciting. She loves sharing epiphanies with her students, "watching people fall in and out of love with literature."

## JOHN BASSO Undergraduate Laboratory Co-Ordinator, Department of Biology, University of Ottawa

Basso, 51, has been teaching molecular biology and microbiology at the University of Ottawa since 2000. Growing up in Montreal, he wanted to be a vet but, ironically for an award-winning educator, he felt he wasn't a good enough student. He has an MA and PhD from Concordia University, and held two postdoctoral research fellowships before turning to teaching. He was a professor at Washington and Lee University in Lexington, Virginia, and then moved to the University of Ottawa where he teaches in both English and French.

### Why he's good

Basso's open-door policy is so well known that even students who aren't in his class drop by his office to see him—their friends who are in Basso's class assure them: "Go

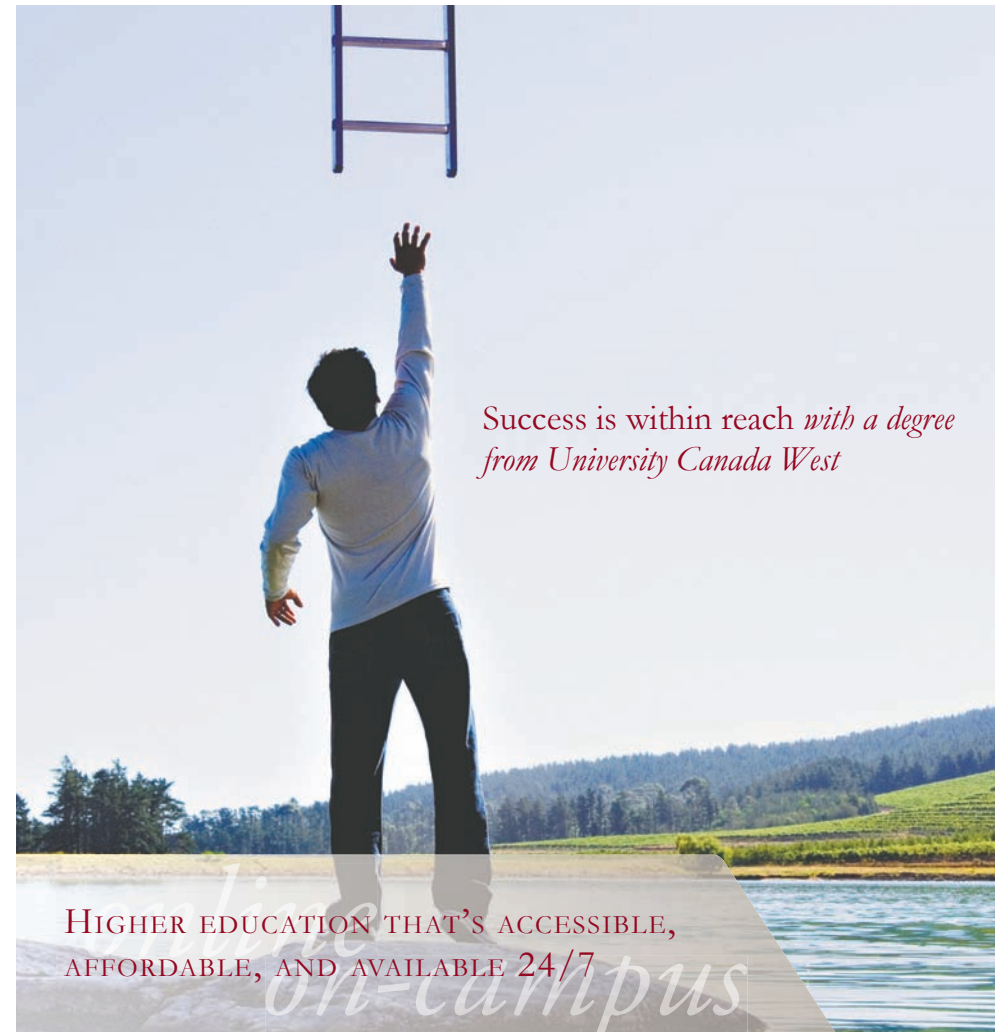
see John. He will help you." Basso offers assistance with everything from deciphering scientific jargon to helping students figure out job applications to prepping them for interviews for medical school. "Students are often intimidated by professors," he says. "Unless you make it really clear to them that you are available, they won't [come to see you.]"

### Teaching style

He tells students: "My name is John," and asks them to avoid calling him "Dr. Basso." "I want to show that I'm just like one of them. Not better than them."

### On engaging students

He finds interacting with students more gratifying than scientific research and has chosen to commit himself exclusively to teaching, rather than trying to juggle both. "With teaching, you have an immediate impact. You can change minds. Independent of the size of the class, you just want to show the students that you care about what makes them unique, you care about what they'll do and that you'll guide them."



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**10 THINGS WE LOVE**

# TECHNOLOGY HAS TOPPLED THE IVORY TOWER

*Course content on smart phones, study notes on Facebook, professors on Skype—and it's a classroom revolution that's been driven by students*

BY MICHAEL SNIDER Illustration by Liz Emerzian



It's not every class that has its own movie trailer. To be fair, Sidneye Matrix, a professor of media and mass communications at Queen's University in Kingston, Ontario, is a bit of a pioneer when it comes to harnessing the power of social media and technology for her courses. Matrix uses an online chat program called Cover it Live for her office visitation hours, offers to remind students about important dates and assignments via text message and posts all of her lectures onto YouTube and iTunesU, a store for free audio and video podcasts.

She even has an app—ClassCaddy—which is free for Apple and Android devices. It provides just about all the resources her students need for her class, including lecture videos, reading lists and a schedule. And if students can't make it to Kingston for September? No biggie. As long as they have Internet access, they can take the course from home—sitting in their housecoat and bunny slippers—just like 400 other online (in addition to 700 offline) students registered for her class, Film240x: Media and Pop Cult, for the fall.

Technology and education have a somewhat checkered past. At one time or another, just about every magical invention has been predicted to change the face of education, everything from radio to the 1957 Skinner Teaching Machine. But walk into a university classroom and the one piece of technological innovation you'll likely see there is a large vertical black slate, which has been a teacher's main tool for displaying and sharing information for more than 200 years.

You don't have to go back that far to see the love-hate relationship between technology and learning. It wasn't that long ago that lap-

tops and cellphones were banned from lecture halls and students were hauled before disciplinary committees for organizing Facebook study groups. Some universities have blocked Wikipedia while others even shunned Wi-Fi networks.

But things have changed. Today, connectivity is ubiquitous, information is limitless and the ability to communicate anytime, anywhere, with anyone has opened vast opportunities for peer-to-peer learning and collaboration. Attitudes about everything from smartphones to virtual classes are not only gaining acceptance in the gilded halls of academia, a growing number of educators view social media and technology tools as indispensable.

But it's not professors and administrators driving the change. "Momentum comes from the students," says Matrix. "When I wasn't creating podcasts, students were taping my classes. When I wasn't creating RSS feeds of lecture notes, students were trading lecture notes on Facebook. If you don't create a mech-

anism for them to collaborate, they will do so on their own," she adds.

So who, or what, is the student of 2011? That's just the sort of question Michael Wesch of the University of Kansas has spent the past several years asking. Wesch is a cultural anthropologist who studies and teaches digital ethnography—essentially how tools of communication have altered how we learn, connect and think. In a 2007 video project, Wesch had 200 students in his Introduction to Cultural Anthropology class collaborate on answering a simple question: "What is it like being a student today?" Participants in the video, which has been viewed nearly 4.5 million times on YouTube, hold up some of their declarations on note pads and laptop screens to help summarize some of the characteristics of students today. Among them:

- 18% of my teachers know my name
- Only 26% of class readings are relevant to my life
- When I graduate, I will probably have a job that doesn't exist today

- I Facebook through most of my class
- "On some fundamental level [students] are not any different than they were 20 years ago," says Wesch. "Most students are still at school mostly to figure out who they are and who they're going to be. It's not that students are different in their nature, it's that they live in a different environment so the same sorts of drives are expressed in different ways." That's the challenge and the opportunity, says Wesch, where technology can play a role. A lot of the technologies we see today, especially in social networking, were created to explore the search for meaning and are based on the ability to connect with others. While having a course Facebook page may seem like it's just pandering to the "tech-savvy" youth of today, it's important to remember that Facebook was born on a college campus and was meant to make connections between people says Wesch.

But anthropology aside, can something like Facebook or Twitter contribute to the academic side of university?

"Absolutely," says Peter Carr, who teaches courses on the impact of information systems on society and social media for business at the University of Waterloo. "The new modern philosophies of education would say it's important to have students working in groups, interacting with each other and the professor and learning the content together."

## BEYOND THE CHALKBOARD

**Facebook** Every course should have a Facebook page. Students can crowdsource—that is, share relevant information with the group and post links to resources. Some profs come up with inventive ideas, such as having students create profile pages for historical figures, replete with extensive bios.

**Twitter** Some professors take questions via Twitter during class or display running commentary on a big-screen monitor.

**Cover it Live** The online chat tool is used by some professors for their office hours rather than managing a queue of bodies lined up outside the door. Students ask questions and everyone can read the replies. Chats are saved and links can be posted online for future reference.

**Skype** The communication tool runs on computers and smartphones and can be a free source of audio or video messaging.

**YouTube/iTunesU** Either is good for recording and uploading audio or video of class lectures; both are accessible on mobile and desktops and are great for catching up on classes one might have missed.

**remind101** An SMS service lets profs program reminders and announcements and send text messages or emails to students.

**Webex** A webinar service that live-streams video to up to 1,000 remote online viewers. Sessions can be recorded and offer e-mail reminders, detailed reporting on attendance and participation and live polling features.

Carr is one of the growing number of professors who spends more time online than in the classroom. Recently, Carr had a group of 30 students work with the Red Cross in Geneva as part of a project to investigate how the organization set up franchise operations and delivered services such as health education. Students connected with Red Cross workers at offices in Uganda, Colombia and India using Skype. During the week, students would be on

the "phone" with Africa and whenever they had a question to ask or if they had something interesting to share, they would buzz Carr at his computer.

"The way I like to think about it is that we can make the outside world more visible to the students and have them interact more with the outside world around their subjects. That, I think, is where there is a lot of opportunity for us to really make education better."

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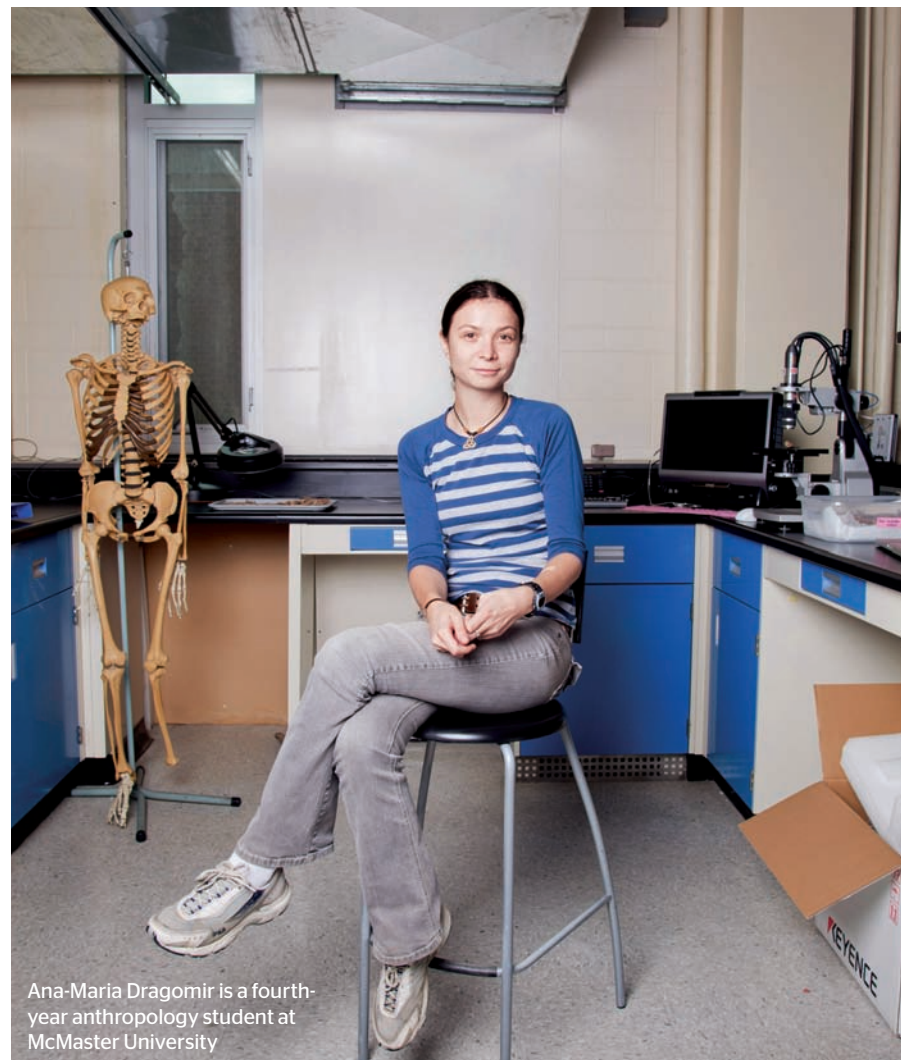
## IT WILL HELP YOU GET A BETTER JOB (REALLY)

*The mix of ideas and the skills to put them in action is what's giving fresh value to undergrad degrees*

BY JENNIFER LEWINGTON Photograph by Hudson Hayden

**R**ecord numbers of first-year university students flocked to campus this fall—but that hasn't stopped nagging questions about the value of a bachelor's degree. Despite persuasive statistical evidence that graduates find careers related to their studies and earn more than others over a lifetime, Canadian universities are under the gun to

demonstrate what it means to have a degree. Prodded by rising expectations of students, parents, government demands for greater accountability, and a push from within to rethink undergraduate education, Canadian universities are expanding efforts to link academic studies to the "real" world. "We know the [degree] credential has value and that employers are looking at it and making hiring decisions based on the credential," says Glen Jones, a professor of higher education at



Ana-Maria Dragomir is a fourth-year anthropology student at McMaster University

the Ontario Institute for Studies in Education. "Universities now are trying to expand the notion of what is associated with the credential that could be helpful to the student, make a better educational experience and yes, that may have down-the-road implications for employability." In addition to co-op education and internships, universities offer co-curricular records that recognize work-relevant skills, such as communication and leadership, developed through volunteer activities either on- or off-campus.

Some universities have started pilot projects to include résumé writing and career exploration in the curriculum, while others spell out course-level learning outcomes—such as the ability to think critically and work with others—valued by employers. The idea is to help students develop knowledge and skills that will apply whatever their chosen career. "You don't want to equip students to be bankers; you want to equip them to do whatever they might be inclined to do," says McMaster University president Patrick Deane, a leading advocate of reforming undergraduate education. His university and others have embraced "experiential learning"—such as undergraduate research projects that offer learning opportunities outside the classroom—as integral to the academic experience.

Melding theory and practice is old hat for professional schools, such as business and medicine, but new as a campus-wide phenomenon. "It's a relatively recent thing for universities across the board to think in terms of the outcome of the learning process to reasonably equip students for what they want to



do," says Deane.

Since 2002, McMaster's faculty of social sciences has offered undergraduate research awards to a dozen or so top students. Over the summer, they earn \$6,000 to work on a project of their choice, in collaboration with a professor, an experience designed to provide insights into potential careers.

Last summer, fourth-year anthropology student Ana-Maria Dragomir assisted Canada Research Chair and McMaster professor Megan Brickley with an inventory of skeletal remains of soldiers from the Stoney Creek battle of the War of 1812. "It was not just a summer job; it was a life experience," says Dragomir, who has landed a part-time job with Brickley this fall. "My research over the summer helped me develop a lot of skills that will be transferable regardless of the career I will pursue," she says.

Increasingly, students draw strong links between a degree and a job. A 2010 survey of first-year students by the 39-member Canadian University Survey Consortium found that future employment ranked highest among eight reasons to earn a degree. In the survey, 43% cited preparation for a specific job while 24% ranked getting a good job as the prime reason to attend university.

So how do universities measure up?

Better than the public realizes, says Paul Davidson, president of the Association of Universities and Colleges of Canada. "The basic premise that the value of a BA is not what it used to be is wrong," he says, citing census information that shows those with an undergraduate degree will earn, on average, \$1.4 million more over a lifetime than others without a post-secondary degree and \$1 million more than college graduates.

An overlooked statistics, he adds, is the creation of more than 300,000 new jobs for university graduates in the recent recession compared to the loss of 430,000 jobs for those without post-secondary education.

In Canada, as in other industrial countries, those with a university degree earn significantly more than those graduating from high school or vocational programs. Based on 2008 data, Statistics Canada reports that earnings of Canadian university graduates were 70% higher than those coming out of high school or trades training and 63% higher in country members of the Organization for Economic Cooperation and Development. As well, employment prospects also rise with educational attainment. In 2009, Statscan reported an 82% employment rate for adults aged 25-64 with a diploma or degree compared to a rate of 55% for who had not finished high school.

But the rise of degree-granting colleges, the expansion of credit transfers that smooth pathways between higher-education institutions, and college bragging rights about the employability of their graduates has universities honing their pitch.

Last month, as Ontario's 20 universities accepted a record 90,000 first-year students, their lobbying arm unveiled a new website, MyEducationHasValue.ca, to explain financial assistance and employment trends. "We know that the whole concept of a career and a job is at or near the top of the priority list of students and parents," says David McMurray, vice-president of student affairs at Wilfrid Laurier University.


At Laurier, which promotes student engagement and is expanding the menu of academic programs that blend theory and practice, a global studies course with a for-credit component on career development will be piloted this fall.

Students will be expected to integrate soft skills normally acquired outside the classroom into their academic studies. "The 'aha' moment comes when they say 'I see how those skills I learn in the classroom transfer into the economy,'" says Laurier director of learning services Gail Forsyth.

At the University of Alberta, experiential learning is also a priority. For example, the university introduced a campus-wide undergraduate research initiative last month for students to take part in projects, in and outside the classroom and for-credit or not, that develop skills of inquiry, analysis and collaboration. "Students are clearly asking for these things because they are learning skills that make critical, informed citizens," says Connie Vanhagen, academic director for the initiative. "They don't just want a pile of facts in their heads. They want to do something with it and that is exactly what employers want, too."

The U of A Students' Union, which has campaigned for the initiative for two years, will put on a two-day symposium next month to show off current collaborations between students and professors. "I think it will improve the perception of the value of having an undergraduate degree," says Emerson Csorba, academic vice-president for the students' union. He is also on a university task force to identify the desired attributes of a U of A graduate. A third-year student in political science at the university's francophone campus, and the first in his family to attend university, Csorba has not settled on a career yet. But he has no doubts why he wants a degree. "To me, the aim of education is to instill critical thinking skills and a sense of engagement in students," he says.

## THINK THERE ARE NO GUARANTEES? ONE SCHOOL'S JOB PROMISE

 Chantal Poirier, a third-year kinesiology student at the University of Regina, knows she is heading into a competitive job market when she graduates in two years. That's why the 20-year-old from Antler, Saskatchewan, took her university up on its unusual offer to guarantee she will find career-related employment six months after earning her degree. If she is unsuccessful, the university will offer her another year of classes, worth \$6,000, for free. Poirier, who attended workshops last year on interview skills, résumé writing, exam preparation and career development activities, is considering a career working with people with disabilities. As part of the guarantee, she spent 40 hours volunteering with the local chapter of Special Olympics. "I hope all this experience and help will guarantee me a job," says Poirier, one of 343 students who took advantage of the offer when it was introduced in 2009. This year, 150 students signed up even before the start of school last month.

According to the province, 98% of University of Regina graduates find employment and the university's 704 co-op education placements last year represents a 24% increase in five years.

So why the need for a guarantee?

"Our studies show the reasons students leave [without graduating] is not for academic or financial reasons but because of a lack of connection and engagement [with the university]," says Regina president Vianne Timmons. She wants to boost the current proportion of students who return after first year. The promise of a successful career is the "hook" for the guarantee, says Timmons, but its real purpose is to connect students to life on campus, in and outside the classroom.

Students who sign up must stay for four years of school, participate in at least 25 hours of workshops, join the university's co-op education program and develop relevant interview skills through mock interviews. They can also attend campus career fairs, join a student club and participate in intramural athletics or volunteer activities. After they graduate, they must demonstrate efforts to find employment.

The university won't know until 2013 who might return for free courses. This year, they will evaluate students in the guarantee program against a random sample to see how they are doing in school. For Timmons, success will be measured by "whether I have a higher percentage of student success for students enrolled in the guarantee."

—By Jennifer Lewington



Rohan Kothari

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10 THINGS  
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## IT WILL OPEN YOUR MIND

*Are classrooms plagued by rote learning with too much focus on students' job prospects? Some critics believe so—but for those with a purer vision of higher learning, all is not lost*

BY ROSANNA TAMBURRI Photograph by Magida El-Kassis



Simon Bradshaw got his creative groove back with a second degree, in Psychology



S

Simon Bradshaw, a University of Ottawa graduate, didn't get much out of his first undergraduate degree in English and

theatre. He admittedly spent too much of his time socializing at the expense of his studies. After graduating and then trying—largely unsuccessfully—to break into the Ottawa acting scene, he returned to Ottawa U determined to make a fresh start. This time around he enrolled in psychology—and his experience couldn't have been more different. For this, he credits his professors, some of whom challenged him in ways no one had before. But a change in his attitude also played a role. He read assignments with a more critical eye, asked questions, participated in class discussions and sought out professors after class. It was difficult at first. "I felt intimidated," he says. "It took a bit of courage to go and strike up a conversation and feel that the questions and thoughts I had were not useless." Yet, he found most professors welcomed the exchange. "So often I had their complete and undivided attention," he says. The knowledge he

acquired pursuing his second degree surprisingly led him back to the theatre. "Ironically, a lot of ideas that I learned in psychology came to apply to the arts and theatre, which I thought I was leaving behind," says the actor, now 30 years old.

Universities have come under a seemingly endless stream of criticism in recent years: Students complain about rising tuition fees and overcrowded classrooms. Professors gripe about the lack of student preparedness and declining academic standards. Ken Robinson, an internationally renowned author and advocate of educational reform, chastises educational systems that shun the arts and stifle student creativity. And one notable U.S. study found that when it comes to teaching students how to think critically, universities fail miserably.



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**“UNIVERSITY CAN BE EITHER AS BIG AS YOU WANT OR AS SMALL AS YOU LET IT”**

Arshad Ahmad, a business professor at Concordia University and president of the Society for Teaching and Learning in Higher Education, is among the first to admit that all is not well in the world of postsecondary education, and he has plenty of ideas to fix what ails it: smaller first-year classes to start; introducing more co-operative, community-service and problem-based learning; encouraging more student-faculty interaction; and getting undergraduates involved in research. But, he adds, the situation is far from the doomsday scenario that some critics would have you believe. Universities, he notes, are more accessible now than they have ever been. Despite its drawbacks, he says, a university education can be a “game-changer” for young people, and not solely because it can help them land a good job. “I would say the glass is definitely half full,” he says.

Eli Cwinn, a master’s student at the University of Guelph agrees. “University can be either as big as you want or as small as you let it,” he says. Over the course of his undergraduate career, he encountered the odd professor too busy or uninterested to talk to students. But by and large most of them seemed thrilled when a curious student showed up at their office door. “They will share their expertise quite willingly,” he says.

Fellow students can be another source of inspiration. Making connections can be difficult in the early years when the classes are big but by the time students reach third and fourth year, there are opportunities for collaboration. “You start to see the world from their perspective and that fuels your growth,” he says. “In every university regardless of how downtrodden it is or how low it scores in the rankings, you can find a spring or well of inspired thinking,” adds Ron Marken, professor emeritus at the University of Saskatchewan. The trouble is, it may not be at the forefront of the curriculum. “But you can find places if that’s indeed what you want,” he says.

Claude Lamontagne, a psychology professor at the University of Ottawa and the recipient of numerous teaching awards, is a strong critic of a postsecondary system that, in his view, emphasizes rote learning over critical thinking. Even so, he concedes, it is still the best place for critical self-discovery. Students, he says, “are capable of incredible insight” but are hampered by a system that all too often doesn’t allow them to express their ideas. Education should be an “awakening,” he says. His advice to students: Take advantage of opportunities like directed-reading courses that allow for independent study and one-on-one

interaction with faculty; opt for classes with low student-to-faculty ratios; and don’t fall into the trap of believing that the sole purpose of a university degree is to get a good job.

“When used creatively, I think university is the best thing that can happen to anyone,” says Roger Moore, professor emeritus at St. Thomas University in New Brunswick. As he sees it, one of its many benefits is that it can help young people discover hidden talents and interests. Moore, a former professor of Spanish, recalls one student asking his permission to create a painting instead of writing an essay as the course required. It was an unorthodox request. Reluctantly, he agreed to it on the condition that she should present it to the class in Spanish. The painting was an intricate and stylized depiction of the 16th century conquest of Mexico at the hands of the Spanish. It took him aback. After many lengthy discussions with the student, he advised her to pursue a degree in the arts rather than try to master the proper technique of essay-writing. The student went on to study architecture; the painting still hangs in his home.



## IT'S AN EXTRACURRICULAR WONDERLAND

Classes might lead you down a certain path, but it's the myriad campus opportunities that help you discover who you really are

BY EGGLE PROCUTA Photograph by Amanda Coleman



Victoria Saigle (centre) is a member of Effusion, an a cappella ensemble at McGill University

**W**hen people reminisce about their time at university, or high-school students look forward to theirs, often it's the campus activities and not the classroom ones that they think about. Tony Chambers, assistant professor of higher education at the Ontario Institute for Studies in Education, says there is a reason for that. "University changes lives," he says and his research shows that experiences outside of lecture halls and labs can contribute as much to learning, and in some cases more. That's why Chambers advocates the use of the term co-curricular to describe all the activities that take place on campus, from student government and sports teams to culture clubs and faith groups. "Extracurricular is misleading because it suggests an à la carte choice," he says. "We need to get away from the sense that learning only occurs in the classroom."

Chambers is calling upon universities and colleges to readjust their way of thinking and ensure that co-curricular activities are an integral part of all programs. This is especially important because, with the rising costs of education, more and more students need to work while they study and can be missing out on the learning that takes place on campus outside the classroom unless it is formally recognized as part of their degree process. Co-curricular activities build emotional intelligence, Chambers says, "and provide graduates with the ability to translate theory into application."

We look at two students who are putting that theory into practice:

### VICTORIA SAIGLE

Saigle, 20, from Metcalfe, Ontario, is in her third year at McGill University majoring in cognitive science, with a minor in French. She hopes for a career in scientific research and wants to be fluently bilingual by the time she graduates.

#### Beyond the classroom

Saigle is in her third year singing with Effusion, an a cappella ensemble specializing in pop, soul and R&B that was formed at McGill in 1999. She found out about Effusion during first year at an orientation session where the group performed. "It looked like so much fun," she says. "It was immediately where I knew I wanted to be."

#### Memorable moment

This came in first year when she was among the 180 students auditioning for one of 20 spots in Effusion. Saigle chose Sara Bareilles's *Fairytale*, because it showed off her range. Although she had studied classical music at high school, she had never performed pop before. "I'm not going to lie," she says, "it was nerve-racking."

#### How she pulls it off

Saigle devotes about five hours a week to Effusion, going to rehearsals two evenings a week. Rehearsals get more intensive when they're getting ready for their two big concerts each year or a tour. She finds it easy to strike the right balance between Effusion and her school work because she knows at the beginning of the year when all her assignments are due and can plan her schedule accordingly. She finished her second year with a B+ average.

#### The payoff

Saigle says Effusion has made a huge difference in enriching her university experience. The other members in the group are like her family and provide an important support network while she's away from home. "Everyone wants to do as much as possible together," she says. "It's really a lot of love. It doesn't seem intensive at all. It's just fun."

#### Word of advice

Saigle says that because McGill is so big, it's hard to be aware of the range of extracurricular activities available. What's missing is cohesiveness in how information is communicated to students.

### SEAN HEISLER

Heisler, 22, from Calgary, is in his final year studying applied engineering at the University of British Columbia. Engineering runs in his family, but Heisler says he doesn't see himself building bridges all his life. He completed his first year at Queen's before transferring to UBC for its multidisciplinary, co-op program.

#### Beyond the classroom

Heisler is deep into university politics now, even though he used to be mostly apolitical. When he signed up as secretary of the engineering department's student club, he jokes that he was drawn to the prospect of a free dinner. After, he became a student senator and that is where he really began to hit his stride. He ran successfully to serve on the university's board of governors and has now been re-elected for a second term.

#### Memorable moment

When he began his first term on the board of governors, he was dismayed at the three-inch binders full of support material that awaited each member at every meeting. "It

was really heavy, really expensive, really wasteful," he says. So he pushed for paperless meetings. Now, all support material is sent electronically and Heisler was able to demonstrate that buying every board member an iPad actually saved money.

#### How he pulls it off

Heisler spends three to five hours a day on student politics—more when he travels to conferences—but he still maintains an A average. He says he builds energy through his involvement, rather than seeing it as a drain on him.

#### The payoff

Heisler has discovered career options like real estate development and human-resources management. As well, he thinks that he would possibly run for federal or provincial office.

#### Word of advice

An advocate of telling students to get involved on campus in anything and everything, he advises networking to find a good fit among the wide variety of activities available. "Dive in," he says, because you never know what's going to strike your fancy.







## THE CHANCE TO DO RESEARCH

*Research isn't just the domain of grad students. Undergrad opportunities can lead to lifelong intellectual journeys*

BY ALLISON DUNFIELD



Nathan Wilbur started fish-population research during his undergrad degree at University of New Brunswick.

Getting a university education conjures up images of students poring over textbooks, cramming for exams and attending lectures. But more than ever, a degree—even an undergraduate one—comes with time spent in a lab. Experts say that hands-on experience is becoming necessary to compete for jobs in the real world. And the opportunities for research are as endless as a student's imagination. Some don traditional white coats and work on campus while others go abroad or trek up north to study the environment.

While lab work was once the domain of master's and PhD students, it's becoming more common for undergraduates to do research as part of their study, said Christine

Tausig Ford, vice-president of the Association of Universities and Colleges of Canada. "Universities are making sure they're taking innovative approaches and incorporating meaningful research experiences for undergraduate students," adds Ford. And lab work at all levels provides many benefits because students improve their critical thinking and analytical skills.

We talked to three students about what they're researching:

**JACQUELINE RICHELLE,**  
*BSc in Biological Sciences,*  
*University of Manitoba*

Jacqueline Richelle didn't imagine that doing research as an undergraduate science student at the University of Manitoba would lead her to India, but that's exactly what happened.

Her journey began after her second year, when Richelle applied to do research work as part of her goal to enter the faculty of medicine. "I felt research experience would be valuable to me if I could find an area that was related to health care." Luckily, Richelle was awarded a summer research position in biological sciences in 2010. She found a supervisor whose work she admired—department head Judy Anderson—and worked with her team to isolate specific individual muscle fibres in mice and zebra

fish, which are activated to generate new muscle when it is damaged or exercised.

The goal is to look at the activation process causing these muscle cells to divide and make new muscle if it is exercised or damaged, she says. It's hoped that Anderson's research could help slow muscle atrophy in those suffering from disorders such as muscular dystrophy, or in elderly populations.

This past May, Anderson invited Richelle to India for two weeks to help teach the technique at the Institute for Stem Cell Biology and Regenerative Medicine (inStem) in Bangalore. That experience was amazing, said Richelle. "Everyone there was so interested to hear what you had to say and it was really nice to be able to collaborate with people on the other size of the world."

**NATHAN WILBUR,**  
*Masters in Civil Engineering,*  
*University of New Brunswick*

As a boy, Nathan Wilbur lived to fish. Fast forward some 20 years, and he's literally swimming with the fish as part of his lab work. The 26-year-old student at the University of New Brunswick is completing his thesis on how changes to the environment are affecting water temperatures and fish populations. "I just love anything to do with salmon and trout and their habitat and that's what this project was all about."

Wilbur was asked to take part in the research by one of his professors, Dr. Allen Curry, when he was completing his BSc degree at UNB. Under the supervision of Curry, who's also the director of the Canadian Rivers Institute, he started his master's thesis on the project in 2009. The research was, according to Wilbur, a perfect combination of high-tech computer work and field research. Researchers wanted to find cold-water regions in the Miramichi River basin where salmon and trout gather if the water temperature climbs past 23 C. Since fish can't endure such high temperatures, they will seek out cooler areas. (Because of environmental changes and human activity, water temperatures have risen in recent years, pushing the fish to find chillier spots.)

The team gathered information on the rivers using a helicopter with an infrared camera, then mapped the cold patches using a computer program. The next step, said Wilbur, was to conduct dives. "Basically I snorkelled with the fish and took measurements on where they were and other conditions, like how deep was the water, how fast was it flowing."

One goal of the study is to help forestry or watershed groups understand how fish are

using the cold water zones so that they can avoid building roads or clear-cutting camps nearby, says Wilbur. The other is to provide them with resources to help them restore cold water areas. Wilbur is completing his thesis and hopes to eventually publish the work in an environmental journal. He may also do a PhD on the same subject. Being able to conduct his research in the field is one reason Wilbur is so enthusiastic about his studies. "We got to observe what the fish were doing with our own eyes, and actually see it right in front of us. I think that's so important. It's not the typical lab experience."

**IDA FOSTER,**  
*BA in Psychology,*  
*Concordia University*

Ida Foster hopes her research in psychology at Concordia University could some day prevent many children affected with Attention Deficit Hyperactivity Disorder (ADHD) from taking up smoking. After her first year, Foster began volunteering at several labs to boost her research experience. One was Dr. Jennifer McGrath's Pediatric Public Health Psychology

(PPHP) lab. McGrath's work examines cardiovascular precursors in children as part of a longitudinal study known as the Healthy Heart Study.

Now in her third year, with McGrath as her supervisor, Foster chose the topic of ADHD and smoking for her honours thesis. Using data from the Healthy Heart Study, she examined the attitudes toward smoking in children with inattentive or hyperactive forms of ADHD. She found that those with inattention-type were more likely not to notice the consequences of smoking, such as lung cancer, while those with hyperactive forms were more likely to notice perceived benefits, such as helping them calm down.

The hope is that the research will help health educators to customize smoking prevention programs for children with ADHD. "What we have found is that the literature that is out there is that those with ADHD are more likely to smoke. So we are targeting kids before they start."

Foster is currently completing a manuscript of the thesis to submit to a journal. She is applying for graduate studies in 2012 in a combined clinical and forensic psychology and law program and hopes to become a clinical psychologist.



## THE CAMPUS BUILDING BOOM

Cool, architecturally-distinguished new academic buildings are sprouting up coast to coast, thanks to bold new thinking and an injection of government cash

BY PHILIP FINE



The gold standard for sustainable buildings is actually a platinum certification, and that's what Lakehead University received for its Orillia campus. It's the first Canadian university to get the award. Opened last fall, the \$43 million Moriyama and Teshima designed Academic Building (officially known as 500 University Avenue) was the first new structure erected on the five-year-old campus. It boasts a geo-thermal system, a green roof and a rain-water retention pond.



**a**rchitect Gilles Saucier was recently given a great compliment. An individual working in a building he designed told him how much he now enjoys going to work.

University administrators seem to know all too well the rejuvenating powers that a good space can offer its dwellers and seem to have harnessed that power for their recruitment and fundraising strategies. They've also been getting architects to help tame sprawling campuses or make traditional downtown campuses more green.

There's a building boom taking place on Canadian campuses and the new buildings have helped lure academic rock stars, while maquettes are now built a bit earlier so that funders can be brought on board.

Architect Bruce Kuwabara says a building can push forward a university's identity as it did when his firm, Kuwabara Payne McKenna Blumberg Architects (KPMB) helped in 2005 and 2009 to transform and open up Concordia University's downtown campus in Montreal, with over 300,000 square metres of new space. More recently it finished both its Centre for International Governance Innovation (CIGI), affiliated with the University of Waterloo and Wilfrid Laurier University, and the doubled-in-size University of Toronto Rotman School of Management.

Architects talk of making campuses more livable, including peaceful courtyards, offices exposed to natural light, windows that let in fresh air, more green space, common areas that offer colleagues from different disciplines the opportunity to bump into each other and places to step into so that conversations might turn into rich debates.

PHOTOGRAPH SHAI GIL

"Some of the most important conversations in learning are not in the classroom," says Kuwabara, who says it has been difficult to try and get approval for common spaces when many institutions believe their money should only go toward classrooms and labs. Michael Heeney, whose firm Bing Thom helped integrate a university and office tower into an existing shopping mall in Surrey, British Columbia, to create a new vibrant Simon Fraser University campus, says "students like to be where the action is and not be segregated in an ivory tower."

Functionally, there have been many changes among the spate of new buildings: flex rooms that can act as a classroom one semester and a TA's office the next, a building that despite its high tech equipment no longer takes on a windowless fortress identity, lecture halls designed to not put students to sleep, libraries that share warehoused collections and make space for breakout rooms and research pods, and architecture that invites the city to walk freely through its public spaces.

The building boom can be traced back to the announcement in January 2009 of the Knowledge Infra-



The University of Toronto just increased the overall academic space on its Scarborough campus by 25% and it's done it with the Instructional Centre. Designed by Diamond and Schmitt Architects, the 15,000-square-metre facility houses both management, and computer and mathematical sciences programs. One innovative feature—rooftop solar cells—could end up generating revenues for the university as any excess energy will be sold to the Ontario Power Authority.



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structure Program, a two-year, \$2 billion federal stimulus package. It funded 538 university and college projects, providing half the costs of infrastructure projects, including new building construction.

The Canadian Foundation for Innovation (CFI), which has been providing tools and materials to researchers since 1997, including funds to help bring on board other partners for new buildings, has injected more than a billion dollars into the university and health sector in the last two years.

By the end of this year, one firm, Diamond + Schmitt, will have unveiled a phenomenal 11 Canadian university buildings, including Queen's School of Medicine, Thompson Rivers University House of Learning and University of Toronto's Scarborough campus.

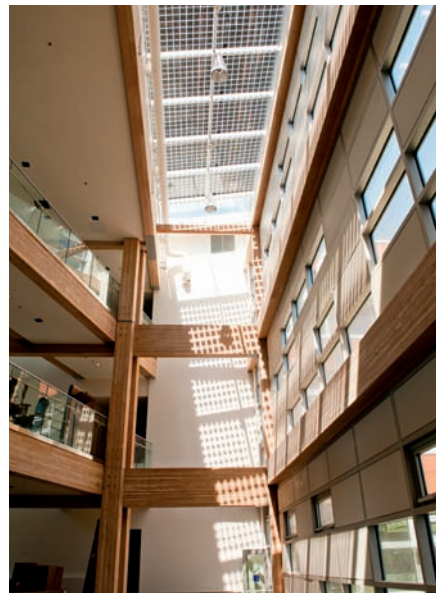
There is a strange juxtaposition here. While there seems to be lots of money available for university infrastructure, the average amount awarded for a funding agency research grant has dropped by nearly 20% since 2004 and three out of four health researchers applying to the CIHR find themselves turned down for funding.

Does this risk having a country with pretty buildings housing cash-starved researchers? According to CFI's Douglas Lauriault, the ratio of infrastructure expenditures to research funding is on par with other developed countries. In the meantime, he says, the building boom has meant that Canadian universities are finally "dreaming big."

The Université de Montréal recently unveiled a new suburban address in Laval. The six-storey building from architects Jodoin Lamarre Pratt, opened in September and stands next to a subway station. Although the building will offer some services to the public its primary function is to provide a home for students in the arts and science, nursing, continuing education and science education programs.



The University of New Brunswick's Richard J. Currie Centre has put a bit of drama into its new sports facility. Designed by B+H Architects, in association with Sasaki and ADI, the \$35 million, five-storey building houses high-performance athletics facilities, a recreational gym, kinesiology labs and sports medicine faculty spaces.



"There is a growing recognition that universities have a unique societal opportunity and responsibility to be test beds for sustainability," says John Robinson, executive director of UBC's Sustainability Initiative. Its Centre for Interactive Research on Sustainability is practising what it preaches—and what it teaches. The \$37 million building, designed by Busby Perkins + Will, possesses a green wall, meets its non-potable water needs with rainwater and recovers heat from one department and returns it to another.

PHOTOGRAPH MARTIN DEE/UBC (BOTTOM RIGHT)

# Working knowledge



**Contributing Editor**  
Cassandra Jowett.  
**Writers** Danielle Lorenz,  
Alanna Glass,  
Vicky Tobianah  
**Illustrations** Mike Ellis

Working Knowledge is back again this year. It's a careers-focused look at the links between undergraduate degrees and employment, arranged by seven fields of study: Engineering and Technology, Arts and Humanities, Education, Sciences and Math, Health and Medical Sciences, Fine and Performing Arts and Business and Commerce.

This section draws from interviews with employers and recent graduates to guide you on how to turn your university degree into a career. We've also suggested some examples of niche programs to help you tailor your degree to suit the type of job you're interested in.

Working Knowledge has been created in partnership with TalentEgg, Canada's leading job site and career resource for

students and new graduates. TalentEgg features co-op, internship, summer and entry-level job postings from some of Canada's top employers, plus industry guides and career tips in its online magazine, the Career Incubator. Find out more at [www.talentegg.ca](http://www.talentegg.ca).





# Education

With an average income of more than \$54,000 per year, as well as summers off, teaching offers a stable public-sector job. But with an increase in the number of teachers graduating from university and with baby boomers putting off retirement, the unemployment rate for new graduates was a staggering 66% in 2010. And it's likely to remain at that level for another five years. While there are employment opportunities in Canada's northern aboriginal communities, other options for new graduates include teaching English abroad but salaries vary greatly based on experience and country. ESL teachers can expect to make between \$35,000 and \$80,000 per year, and many teach in private institutions or in postsecondary institutions. Education majors can also try for jobs in institutions such as art galleries and museums.

## What Employers Want



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## Education programs you may not know about...but should:

### ➤ Psychology

A senior-year internship allows students to work with children and adults with disabilities.  
—University of Toronto at Mississauga

### ➤ Adult Education

Introduces students to theories of adult learning and development.  
—University of the Fraser Valley

Brock University, University of New Brunswick, University of Regina

### ➤ Recreation and Health

Students learn to plan, implement and evaluate health and wellness policies and programs.  
—University of Victoria

### ➤ Integrated Science

For those who want to teach

science at the primary or secondary school level.  
—Carleton University

### ➤ Outdoor Adventure Leadership

Combines academic classes with courses on white water rafting, rock climbing and wilderness emergency first response.  
—Laurentian University

### ➤ Artists in Community Program

Designed for those already trained in the fine and performing arts.  
—Queen's University

### ➤ Music Education

Focuses on vocal or instrumental training at either the secondary or elementary level.  
—University of Western Ontario

## From Class to Career



**CRYSTAL YOUNG**  
Communications Instructor,  
College of the North Atlantic  
Bachelor of Education,  
Memorial University, 2009

Crystal Young, 26, says that she worked and volunteered with youth organizations, and student groups while completing her degree. "It gave me hands-on experience before I spent one hour in the classroom," she says. She adds that students need to understand the teaching job market because it's extremely competitive. "I knew I needed to not just limit myself to working in junior high and high school."



**JACALYN ARMSTRONG**  
Teacher, Dawson Alternative  
Bachelor of Education,  
McGill University, 2008

Jacalyn Armstrong, 26, believes trying new experiences makes you a better teacher. That's why she teaches in an international baccalaureate program and a Sport-Etudes program, and works closely with students with behavioural difficulties and special needs. "If there's a chance that an experience will make you a better teacher, then do it."



**LANDON WHITE**  
Middle Schools Teacher,  
Beautiful Plains School  
Divisions (Carberry Collegiate)  
Bachelor of Arts and Bachelor  
of Education,  
Brandon University, 2010

Landon White, 23, knew he would be suited for a career in education when he worked as a kids' sports coach after high school. Now, after completing his BA and BEd at Brandon University, White works as a grade 8 teacher at Carberry Collegiate in Manitoba. It's a small school with just over 300 students enrolled from grades 5 through 12. White suggests that those looking into the education field should always keep learning and pursuing opportunities to build their skills. "The dream teaching job won't always be available right out of the gate; it may take some time," he says. "But the best thing to do is teach and gain experience any way you can."

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# Sciences & Math

Since there are many different disciplines to choose from it's never been easier for science and mathematics graduates to start a successful career. In 2011, the average annual salary of an employee working in the sciences and mathematics was about \$60,000. But the numbers can vary greatly, depending on what discipline you're in. For example, starting wages for cytotechnologists begin at \$40,000 but can go up to \$70,000. Ecologists, however, can expect to receive a starting salary of \$25,000, although that number can eventually rise to \$100,000. Environmental consultants can expect a starting salary of \$35,000 but that will then rise to over \$80,000. Statisticians, who can also start at \$35,000, can eventually earn \$100,000. Students interested in the sciences should also consider the healthcare industry when thinking of employment, especially if they have post-graduate degrees in medicine, pharmacy, ophthalmology, physical therapy, acupuncture, or chiropractics.

## What Employers Want



**RENEE CHENG**  
Human Resources  
Business Partner/  
Senior Recruiter  
Algorithmics

➔ Most of our entry-level positions are in two core areas: software engineering and financial engineering. Creativity and innovative thinking are incredibly important, as are flexibility, a driven attitude, a strong team-orientation, time management skills and most importantly, an appetite for learning.

It's sometimes difficult for new graduates to transition their thinking from purely theoretical, which is often the approach at university, to a more practical approach. Our industry is about solving complex risk problems in a practical way. We encourage graduates to look for opportunities to get involved in practical problem solving and take a variety of courses. This helps them to round out their skill sets by developing their communication and teamwork skills.



**YEE MAK**  
Senior Human  
Resources Manager  
Maple Leaf Foods

➔ The co-op program at Maple Leaf started over 10 years ago with only a handful of students. Now we have over 25 students at any one time. We recruit across multiple disciplines—marketing, finance, engineering, information technology, and product development, across multiple businesses. One of our entry-level programs that we are very proud of is the Product Development Co-op Program. We hire Food Science co-op students for four and sometimes eight-month work terms for both our Protein and Bakery business units. Besides education we want self-

starters who take initiative and have strong leadership abilities. We are looking for people who value transparency, communication and collaboration.

## From Class to Career



**SUNNY UPPAL**  
Policy Advisor, Chemicals  
Management Division,  
Environment Canada  
Bachelor of Science in Biology,  
University of Western Ontario,  
2008  
Master of Environmental  
Health Policy,  
Columbia University, 2010

Sunny Uppal developed an interest in biology and environmental science in high school. That's also where he discovered that he was interested in politics and international relations. "In university, I found

myself taking courses in environmental sciences, as the topic was becoming increasingly political," he says. After completing his biology and master's in environmental health policy, Uppal worked on international environmental agreements for the United Nations in Geneva, Switzerland. In April, 2011, he became a policy advisor with Environment Canada. "I now work on building Canada's positions and following up on our obligations to international environmental agreements pertaining to chemical substances." For students interested in working in science on an international level, Uppal advises attending schools with solid political science programs. "I would look at the many universities which offer exchange programs and co-op opportunities to gain both work and international experience."



**LAURA MACLEAN**  
Graduate Dietitian,  
NOR-MAN Regional Health  
Authority  
Bachelor of Science,  
Acadia University, 2010

Laura Maclean is a graduate dietitian on a regional diabetes team in Manitoba. She says pursuing a degree and career in nutrition isn't easy—like most jobs in science and healthcare, it requires a lot of dedication and hard work. But she attributes much of her success to her experience interning in the field. "A classroom can only teach you so much, but it was my on-the-job experience that really helped to build my knowledge and confidence in my abilities as a nutrition professional."



**RYAN KAZMERIK**  
Software developer,  
Ideaca Knowledge Services  
Bachelor of Computer  
Information,  
Mount Royal University, 2011

Ryan Kazmerik designs and develops software for companies, primarily in Calgary's energy field. Kazmerik suggests that those interested in computer science "try to get involved in another discipline such as business, medicine or communications." He adds that "computers are a powerful force but only if used in conjunction with something that gives the technology purpose."

## Science programs you may not know about...but should:

### ➤ Environmental and Conservation Sciences

Students develop solutions to issues such as decreasing renewable energy resources, global climate change and wildlife conservation.  
—University of Alberta/Yukon College joint degree program

### ➤ Forestry

Students get a combination of science, engineering and business courses. They also have the option for a minor in commerce at the Sauder School of Business. Students can also complete five co-op terms, allowing them to

graduate with nearly two years of paid work experience.  
—University of British Columbia

### ➤ Geocomputational Science

Students will utilize computer science programs and geographic problem-solving tools and theory to prepare them for careers in mining, oil and gas and government  
—University of Toronto

### ➤ Terrestrial and Aquatic Ecology

Provides a background in field ecology.  
—Laurentian University

### ➤ Early childhood education and science

Focuses on the social, emotional, cognitive and physical development of young children. Allows students to graduate with a university degree and a college diploma in only four years.  
—Guelph University/Humber College joint degree program

### ➤ Water Resource Science

Water quality and adequate supply are important issues and this program focuses on finding the solutions.  
—Lakehead University

### ➤ Photonics

This program helps students develop an understanding of the technical applications of light; participants in the program learn about fibre optics and lasers.  
—Wilfrid Laurier University

### ➤ Bilingual Environmental and Conservation Science

The only program of its kind in Canada allows students to complete half of their course work in each of the two official languages, so they may obtain a fully bilingual degree.  
—University of Alberta



# Health & Medical

As Canada's population ages, demand for medical imaging technicians, cardiovascular technicians, medical sonographers, ultrasonographers and other jobs that are essential to the diagnostic end of the medical industry will continue to grow. Depending on a few factors, diagnostic technicians can earn more than \$80,000 each year. The relatively new field of genetic counselling is also fairly lucrative with counsellors making an average of \$65,000 to \$85,000 annually. Doctors are among the highest paid professionals in the healthcare industry with an average starting salary of around \$100,000. That amount can go as high as \$500,000 depending on the type of speciality but the road to becoming a doctor—an MCAT, medical school and long work hours—can be extremely demanding for many students. Other careers for those graduating with a health sciences degree include naturopathic doctor, psychiatric nurse, gerontologist, midwife, athletic therapist, chiroprapist, coroner, allergist or speech language pathologist.

## Healthcare programs you may not know about...but should:

► **Bilingual Nursing Program**  
Combining a standard nursing curriculum, which is taught in English with class work that is conducted in French, this program's students are fully bilingual by the end of their degree. It allows graduates to work as nurses in any province or territory in Canada.  
—University of Alberta

► **Addictions Counselling**  
In the only program of its kind in Canada, students learn theoretical knowledge, clinical expertise and practical skills to treat, prevent, and promote issues related to addiction.  
—University of Lethbridge

► **Adaptive Movement Science**  
► Students use theory and practical applications to learn how to develop sports and exercise programs and policies for people with disabilities.  
—University of Regina

► **Fitness and Health Promotion**  
Using practical experience through workplace internships, graduates can explore career possibilities in clinical environments as well as in health and fitness fields. Students can earn a Bachelor of Applied

Science as well as a diploma in health and fitness promotion in only four years.  
—Guelph University/Humber College joint program

► **Health in Society**  
Determining how the environment impacts our health is the focal point of this program.  
—McGill University

► **Clinical Exercise Physiology**  
Through study and research, students develop specialized physical activity programs for individuals with diseases or chronic illnesses. Students can become clinical exercise physiologists after graduation or pursue graduate education in physiology.  
—Concordia University

► **Radiation Sciences**  
Using x-rays and other diagnostic imaging technology is crucial to the health sciences field. Students learn about general radiography, mobile and operations room radiography, fluoroscopy, specialized contrast procedures, mammography, and computer tomography or CT scans.  
—University of Prince Edward Island

## What Employers Want



**ASHLEY ELLERBECK**  
Recruiter,  
Northern Health

➤ Northern Health searches for individuals who are genuinely passionate about the career paths they have chosen. We recruit to fill vacancies that span a wide range of professions, which include nursing, health sciences, support, and management and leadership roles. Considering there is a range of professions, minimum qualifications and certifications will differ; however, there are crucial core traits that we look for in all candidates.

We actively recruit individuals who are committed to providing exceptional health services. Top attributes that Northern Health looks for include: the desire to be a part of an outstanding healthcare team whose goals include building healthier communities, coming aboard with a positive attitude, willingness to embrace cultural diversity, respect for yourself and others and a desire to make a positive difference in the lives of others.



**LYNE CHAMELOT**  
National Director,  
Human Resources,  
LifeLabs

➤ LifeLabs will recruit recent graduates of laboratory science programs for many roles. In addition to a medical laboratory science diploma or degree, some technologists may need additional certification or registration with a regulatory body or college. Our medical science staff will have PhDs in the laboratory science discipline they practice while pathologists are also medical doctors. Successful completion of the required programs is important, but we also look for a depth of technical knowledge through testing, passion for

the role and for working in healthcare. In the end, it's all about the patient and helping them. In addition to technical knowledge, LifeLabs looks for individuals with strong problem-solving skills and a dedication to quality and teamwork. What the potential hire brings to the table holistically is important as there are many career opportunities within LifeLabs that could exist down the road, as the organization and the individual learns and grows.

## From Class to Career



**STEPHANIE WALKER**  
Registered Nurse,  
Health Force Ontario  
New Grad Initiative,  
Trillium Health Centre  
Bachelor of Science (Nursing),  
York University, 2011

Stephanie Walker, a 22-year-old registered nurse who works in the birthing suite unit at Trillium Health Centre in Mississauga, says her first experience in the field was during her practicum placement at Trillium in January. After graduating in April, Walker came back through the Health Force Ontario New Grad Initiative, which includes a six-month orientation. "I wanted to come back to Trillium to start my career because I had a wonderful placement here," she says. "My role as an RN in the Birthing Suite Unit is to assess and triage pregnant women who come into the hospital, provide supportive and assistive care in all stages of labour for the pregnant woman and her family, and care for mother and baby post-delivery recovery period." The unit also includes an operating room to perform caesarean section deliveries in which the RN is the scrub and circulating nurse.



**KIRSTEN FIEST**  
Research Assistant,  
University of Calgary  
Bachelor of Science  
(Psychology),  
University of Calgary, 2008

Kirsten Fiest worked to develop her research skills in the medical field by engaging in extracurricular activities that connected her with professors. One of them even ended up as her honours degree supervisor. "My class to career transition was made easy because I had fostered relationships with many professors and students," she says. "Research experience early in your degree is invaluable when looking for a job once you have graduated." Fiest, 25, now works as a research assistant at the University of Calgary in epidemiology, specifically focusing on seniors' mental health. She knew she wanted a career in the medical field after volunteering in research labs in different disciplines. "I generate research questions, conduct literature reviews and searches in that area, perform the relevant statistical analysis and write the results for publication in peer-reviewed journals. I have the opportunity to present my results at academic conferences, as well as to industry partners and specialists in the academic world."



# Fine & Performing Arts

In 2007, the Canadian arts and culture industries contributed \$46 billion to the country's GDP and employed over a million people. However, the average wage in 2010 for those employed in the fine and performing arts was \$28,793, which is comparatively lower than most other industries. But not all graduates of the fine and performing arts end up in cultural industries. Indeed, 40% work in sectors such as business and manufacturing. Many of those employed in the fine and performing arts industries are entrepreneurs who set their own hours; thus, their salary varies in range. For example, photographers can make an average of \$38,835 per year depending on their skill level, location, and how much they charge per shoot. On the other hand, some graduates can find jobs as art and museum curators whose salaries in large cities can be \$88,000 or more.

## What Employers Want



**SHELLEY STEVENSON**  
Director of Human Resources  
Stratford Shakespeare Festival

in theatre is essential and all staff are expected to be flexible, adaptable and have good organizational skills.

➔ There are approximately seven people working behind the scenes for every performer on stage, which means there are lots of opportunities at the Stratford Shakespeare Festival. We often hire graduates as assistants in design and as apprentices in our production shops including props, wardrobe, crafts and scenic art. We hire arts administration graduates in assistant roles in marketing, fundraising, and administration. Rather than grades, we focus on the candidate's experience through school, community theatre or other professional arts organizations. Extracurricular involvement



**MICHAEL SHAMATA**  
Artistic Director  
Belfry Theatre

etiquette, discipline, and a positive attitude cannot be overestimated when working in a creative and collaborative business.

➔ The Belfry Theatre hires for a wide range of entry-level positions, which include: stage management apprentices, stage crew and technician positions, box office assistants and actors (should the plays in the season include young characters). It is typical for us to seek out a recommendation for a new grad from one of their instructors, or from a theatre professional who has worked with them. Performance and production students can always seek outside experience to enhance the training and experience that they receive at school. A strong sense of theatre

## From Class to Career



**EDELINE BERNAL**  
Motion Designer  
CTV, Bell Media  
Bachelor of Design,  
York University/Sheridan  
College, 2010

The current motion designer for CTV discovered design by accident in Grade 10. It was then that Bernal learned that design itself is less about the arts and more about the idea. Now, Bernal's job includes designing and animating graphics that you typically see on television. She's been able to work on the *Marilyn Denis Show*, *So You Think You Can Dance Canada*, and even the Royal Wedding. Bernal says she still continues to learn each day. "I learned that 'Career' is just like

an extended classroom. You still keep learning, minus the Bs and the A+s."



**ADAM CLARK**  
Location Sound Recordist,  
Adam Clark Sound  
Bachelor of Fine Arts (Film),  
York University, 2011

Adam Clark, 21, intended on being a director in his first year of film studies at York University. It wasn't until he started experimenting with sound editing on one of his first films that he realized that maybe directing wasn't what he wanted to do. "The sound courses and the way they were taught really

ignited my imagination and passion," he says. "Since then, I have continued to learn, stretch and hone my skills. I invested my life savings in a state of the art sound kit, which I continue to add to and develop to keep up with industry demands." Currently, Clark works as a location sound recordist and has put his entrepreneurial skills to the test by starting his own company, Adam Clark Sound.



**ROB KRASZEWSKI**  
Coordinator, Board and Executive Relations, TIFF  
Bachelor of Arts Honours  
(Theatre Studies),  
University of Guelph, 2009  
Master of Arts (English),  
University of Guelph, 2010

Rob Kraszewski knew he wanted to have a career in the arts after playing the Cowardly Lion in his Grade 7 production of *The Wizard of Oz*. "There's something about communicating with people that's always gotten to me," says Kraszewski. It turns out that his theatre degree ended up being far more practical than he had ever imagined. Now working for the Toronto International Film Festival and its board of directors, a typical day for Kraszewski can involve everything from setting up a meeting room to getting a phone call from Francis Ford Coppola to researching how the organization can work to be even more efficient. "It's a truly varied job that keeps me on my toes," he says. If you're looking to make use of your fine arts degree, Kraszewski suggests doing research—the fun kind. "Watch a ton of films. Good films, bad films, funny films, difficult art films, watch as many as possible."

## Fine and Performing Arts programs you may not know about...but should:

### ➤ Music Administrative Studies

Graduates of this program—the only one of its kind in Canada—can find jobs in the music industry that range from publishing, manufacturing, distribution, production and marketing.  
—University of Western Ontario

technical instruction and professional practices.  
—Emily Carr University, Ontario College of Art and Design University

### ➤ Computing and Creative Arts

Students get to not only direct and create music, art, drama and film but also develop the software that allows them to be creative.  
—Queen's University

In this joint program between the University of Windsor and University of Detroit Mercy, students combine art and architecture.  
—University of Windsor/University of Detroit Mercy joint degree program

### ➤ Bachelor of Design

This renowned joint program offers graduates employment in graphic design, advertising, marketing, and cultural production industries.

—York University/Sheridan College joint degree program

### ➤ Theatre and Drama Studies

Combines the training of an acting school with the academic aspects of a drama degree.  
—University of Toronto at Mississauga/Sheridan College joint degree program, Concordia University

► **Computation Arts**

Designed to give creative students the technical knowledge they need to become a designer or an artist. The program allows students to create innovative digital media and understand how culture and politics play a role in media.  
—Concordia University

► **Critical and Cultural Practices**

After completing a foundation year with courses in art, design, and media, students can enter the Critical and Cultural Practices program where they split their time between working in an art studio and taking academic courses to understand the role of history and theory in art. This

four-year program gives students a background in understanding the contemporary art they create.  
—Emily Carr University of Art + Design

► **Digital Audio Arts**

The only degree program of its kind in western Canada features a combination of academic courses and hands-on experience in studios and labs. Students hear guest lectures from various industry specialists and gain invaluable work experience through interdepartmental opportunities with music, new media and the dramatic arts.  
—University of Lethbridge

► **Visual Arts**

Students in this four-year program will take a variety of courses in art history, photography, painting, drawing, digital media and critical issues pertaining to the study of visual arts. They will gain an understanding of different art techniques and practice them in studio. At the end of the program, all students will present their work in the Bachelor of Fine Arts Candidates' Exhibit.  
—University of Windsor

► **Dance**

This program is the oldest and most comprehensive university-level dance program in Canada and combines rigorous studio

time with academic courses in dance and the arts. The program offers students the opportunity to perform in public concerts and workshops and in the annual Festival of New Choreography. Typical courses explore the creative process of performance, dance history, dance teaching methodologies and body therapy. Students also have the opportunity to study computer applications in dance studies such as dance science.  
—York University

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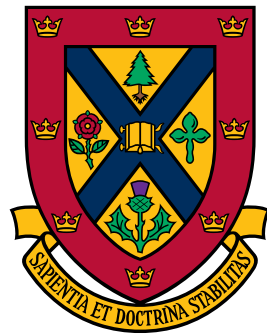
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WORKING KNOWLEDGE



# Engineering & Technology

Despite the recent global economic slowdown, engineers and technical graduates remain in demand, particularly by multinational technology and resource extraction firms. The median salary for new graduate engineers is around \$46,000 and depending on the level of education acquired, professional certification and experience, graduates who specialize in agricultural, aerospace, or environmental engineering can expect to earn \$100,000 or more as they advance in their careers. With employment rates for engineering graduates averaging 90% after two years, students can tailor their degrees around their strengths and interests, confident that there will be jobs after graduation.

## What Employers Want



**STEPHANIE RYAN**  
*Director,  
Talent Acquisition,  
Suncor*

➔ For the majority of our entry level roles, we look for a business or engineering degree. Most of these roles are engineer-in-training positions for a variety of disciplines including mechanical, chemical and civil engineering. Good academic standing is important but the ability to balance multiple priorities in your personal life is a good indicator of your future success with us. In other words, we're looking for the whole package—you perform well academically, have prior work experience, come to the interview prepared, and have interests outside work and school. We get really excited by candidates who already know all about our health and safety, sustainable development and community investment practices and are eager to be a part of our culture.



**TIM CUTT**  
*President,  
BHP Billiton  
Canada Inc.*

➔ BHP Billiton Canada offers an entry-level graduate development program across a number of disciplines. This three-year rotational program provides graduates with the opportunity to work in multiple locations and support our different assets and projects. When recruiting, we look for graduates who perform well academically and who demonstrate they are active members of their community through volunteer activities, arts and cultural pursuits, sporting teams, and community service. Graduates who have a global vision and are keen to embrace the learning, mentoring and development offered to them are those who are most successful in our program.

## From Class to Career



**ANDY ZHANG**  
**Software Developer,**  
**Intel of Canada Ltd.**  
*Bachelor of Applied Science,*  
*University of Waterloo, 2010*

Software developer Andy Zhang says the six co-op terms he completed while he was a computer engineering student at the University of Waterloo—through which he accumulated two years of work experience in a number of fields—contributed greatly to getting an eventual offer of employment from Intel after graduation.

“One major advantage of studying at a university that offers a co-op program is the ability to graduate with real-world job experience,” says Zhang, now 23. “When competing against other

university graduates, having work experience gives you a significant competitive advantage.”

It also helped that in much of those two years, he worked with the same programming language—Array Building Blocks—used to develop the project he works on now. It’s a programming model that helps developers speed up intensive mathematical computations by allowing them to fully utilize available CPU resources.

“The Array Building Blocks development team is a talented, high-energy group with a wide

range of backgrounds. They are eager to help out with any issues that may come up,” Zhang says. “I’ve learned a lot in my 10 months here at Intel.”



**SHANNON O’KEEFE**  
**Engineer In Training,**  
**Sustainment Investment**  
**Planning, Hydro One,**  
*Bachelor of Applied Science,*  
*University of Toronto, 2011*

Shannon O’Keefe knew she wanted to work for Hydro One as soon as she went for a job interview. “Everyone was so friendly and welcoming. I knew it would be a great place to work,” the 23-year-old says. She completed a 16-month

internship with the company between her third and fourth years at the University of Toronto and says the experience complemented her education so much that her grades actually went up.

Upon graduation, she decided to return to Hydro One. O’Keefe says she sees the opportunity as a great way to expand her knowledge and skill set. “There are training sessions and tours of transformer stations, and there’s even the opportunity to complete your master’s in engineering.”

She’s currently enrolled in the Masters of Engineering in Electric Power Engineering program being offered by the University of Waterloo in conjunction with Hydro One.



**LYNDSLEY THOMAS**  
**Reservoir Engineer in**  
**Training, Nexen Inc.**  
*Bachelor of Applied Science in*  
*Mechanical Engineering,*  
*Queen’s University, 2009*

Lyndsey Thomas, 24, works in Calgary, but she is responsible for 2,600 barrels of oil production per day from about 40 wells in Yemen, a country she recently visited to see Nexen’s field operations first hand. “In a short time I have

gone from being a university student who was only responsible for my own grades, to playing an important role within my team,” she says.

While a student at Queen’s, Thomas maintained her honours-level grades and participated in a variety of extracurricular activities, such as being a teaching assistant for a first-year engineering course, teaching dance classes, and organizing welcome events for new students. “This demonstrated that I had the academic abilities to work at Nexen and was a well-rounded candidate who would work well in teams. Thomas also completed two summer internships with Nexen where she was able to prove her technical ability. “I showed an eagerness to build a career in the oil and gas industry.”

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## Engineering and technology programs you may not know about...but should:

### ► Interactive Media and Design

In this joint degree program, graduates earn a bachelor's degree and a college diploma.

—Algonquin College/Carleton University joint degree program

### ► Interactive Systems Design

While studying the role of human cognition, development, memory and perception, students design web applications and games and test and implement these systems.

—University of Saskatchewan

### ► Bachelor of Science in Computing and Solid-State Device Technology

The practical aspects of computing and the manufacturing, control,

and research of electronic gadgets are integral to this program and students can expect to clock countless hours in the lab.

—Brock University

### ► Bachelor of Technology in Automotive and Vehicle Technology

Graduates of this degree/diploma program, which has numerous four-month co-op placements, are highly sought after by automotive companies.

—McMaster University/Mohawk College joint program

### ► Bachelor of Science in Chemical Engineering, Oil Sands Stream

The Alberta Oil Sands contain more than 1.7 trillion barrels of oil. This program offers site-specific training and knowledge that can't be obtained anywhere else in the country.

—University of Alberta

### ► Energy Systems Engineering

Students develop the skills to ensure that energy consumption can occur economically and without environmental harm through courses on hydrogen power systems, solar technologies, wind power and sustainable energy systems.

—University of Ontario Institute of Technology

### ► Environmental Design in Interior Environments

Constructing a program around studio design, this third and fourth year degree option allows students to explore the relationship between natural and man-made environments.

—University of Manitoba, OCAD University

### ► Building Engineering

The only Canadian building engineering program is an interdisciplinary program that incorporates courses from different engineering streams like civil, mechanical and electrical.

—Concordia University

### ► Engineering and Society

This five-year program aims to help students understand how their future engineering activities will impact communities. Graduates go on to work in city planning, environmental assessment, international development and safety engineering.

—McMaster University

### ► Engineering and Management

This five-year program is an integration of science and business. Students learn how to run their own engineering company. Students can also take advantage of a co-op work experience.

—McMaster University

### ► Biomedical Engineering

Biomedical engineering is one of the hottest new fields and this program will help students apply their engineering knowledge to health sciences. Students eventually specialize in one of three fields: biomechanics, biosignal processing or pharmaceuticals.

—University of Guelph

### ► Environmental Engineering

This program gives students a comprehensive understanding of the environmental effects of engineering practices. It explores topics like air and ground pollution, renewable energy, hazardous waste management and air quality.

—Dalhousie University

### ► Nanotechnology Engineering

The program focuses on four core themes: nano-engineered materials, nano-electronics, nano-biosystems and nano-instruments and prepares students for this new fast-growing industry. Co-op is compulsory for all engineering programs at Waterloo to ensure students gain adequate work experience.

—University of Waterloo

### ► Space Engineering

In this unique program—the only one of its kind in Canada—students acquire a comprehensive knowledge in the design, manufacture, integration and management of the hardware and

data systems in space projects. Along with taking traditional science courses, students also learn about wireless communication systems, orbital mechanics and electrical power systems. Graduates go on to work in the space industry, robotics and automatic, telecommunication and biomedical instrumentation.

—York University



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# Arts & Humanities

Arts and humanities degrees may not seem like the most practical degree to get—especially with the rising cost of tuition and the increase in youth unemployment. But it's actually one of the best career moves a student can make. That's because arts and humanities usually produce well-rounded individuals, and employers know how crucial those types of people can be to the success of an organization. Arts and humanities graduates often excel at critical analysis, problem solving, teamwork and effective communication—all attributes that are vital to companies seeking to redefine themselves in struggling times. In 2011, the average wage for someone working in government and social sciences was \$57,135, but much of that depends on location, education level and work experience. Entry-level wages for volunteer managers—a key position in many NGOs and not-for-profit organizations—is between \$20,000 and \$40,000 although those can eventually rise to \$60,000. Other possible career opportunities include industrial organizational psychologist, curator, insurance underwriter, criminal intelligence analyst, principal researcher, interpreter, public policy analyst, translator, cartographer, conflict management practitioner and historian.

## What Employers Want



**NANCY MOULDAY**  
Manager,  
TD Business Banking

or sales experience, and enjoy working in a team environment, whether their experience has been in school, work, sports or volunteer work. They should also enjoy giving back to their school and community because one of our most important mandates at TD is to find ways to give back to the community.



**DOUG SPOONER**  
Human Resources  
Associate,  
Toronto 2015 Pan/  
Parapan American  
Games

➔ In TD Business Banking, we have an 8-10 month associate program, which is a combination of in-classroom training, online learning and mentoring. I look for individuals who have an undergraduate or a master's level degree, but the great thing is that they don't need a business degree. They could have a degree in anything as long as they have taken some accounting and finance courses. When it comes to the softer skills, I look for individuals who demonstrate great initiative, have some customer service

➔ The Toronto 2015 Pan/Parapan American Games Organizing Committee hires across a broad range of roles within our eight departments. We're looking for high achievers with balance across their lives. Sport participation is valued, but so are other activities such as part-time work in a related field, the arts, clubs, tutoring, event planning, student associations. When hiring for entry-level roles, we look for demonstrated leadership ability, strong interpersonal and communication skills, self-motivation and the ability to be confident without being arrogant.

## Arts programs you may not know about...but should:

### ➤ Industrial Relations

Focuses on the social and economic factors that impact labour management practices and institutions.

—McGill University

### ➤ Distinct and Diverse Communities

Combines theory, practical coursework and training from three different institutions. Graduates are well suited to careers working with indigenous communities.

—Brock University, Sault College and Anishinabek Educational Institute joint degree program

### ➤ Sport Psychology

Students learn about sport and health psychology, rehabilitation and occupational therapy, sport research, and coaching.

—University of New Brunswick, Laurentian University, Acadia University

### ➤ Music Cognition

This specialization within the Department of Psychology, Neuroscience and Behaviour allows students to understand how the brain processes music and how this can affect cognitive development.

—McMaster University

### ➤ Knowledge Integration

This program is for those unique individuals who can't be categorized—they're artists and scientists. In their third year, students design a museum exhibit.

—University of Waterloo

### ➤ Communication, Culture and Information Technology, Digital Enterprise Management Specialization

This joint honours bachelor's degree and college certificate specialization encourages students to develop a portfolio that might include websites, short films, advertisements and games.

—University of Toronto at Mississauga and Sheridan College joint degree program

### ➤ Geographic Analysis

Using a variety of tools, students learn to assess and analyze different geographic issues. Geographic Analysis students get a global perspective through annual field trips in each of the first three years of the program. The first year trip examines the urban, rural, agricultural, tourism and environmental aspects of the Niagara peninsula, while the third year trip allows students to either stay in Canada or spend a week in the Caribbean, the United States or Europe.

—Ryerson University

### ➤ Circumpolar Studies

Taking courses offered through Yukon College and several Canadian universities, students learn about a host of circumpolar issues.

—University of the Arctic/Yukon College

## From Class to Career



**REBECCA KASTER**  
Analyst,  
Accenture

Bachelor of Arts in Arts and Business,  
University of Waterloo, 2011

As an arts graduate working in a technology-driven company, Accenture analyst Rebecca Kaster knows a thing or two about landing the right job. Kaster joined the global consulting firm in February after earning a degree at the University of Waterloo for German language and international business. She now uses these specialties on an Ontario public service IT infrastructure project she's working on where the vendor is a German company. Although only 23, Kaster has already travelled to Germany and Paris for business. "You can pick a new project, a new industry, and as long as you have the soft skills, you can pick up the knowledge and run with it," said Kaster. "At Accenture, I'm impressed with how open people are." Before joining Accenture, Kaster completed several co-op placements including positions at a major Canadian technology firm, and in finance and process engineering at a major Canadian bank.



**VICTOR MA**  
Financial Advisor,  
Sun Life Financial

Bachelor of Arts in Psychology,  
University of British Columbia,  
2010

As Victor Ma, 24, sees it, a degree in arts and humanities can take you many places—even finance. After completing his degree, Ma moved to his current job as a financial advisor with Sun Life Financial in Burnaby, British Columbia. "The goal when going into my psychology major in university was to give myself the opportunity to help others; this job gives me that," says Ma. Every day, Ma helps Sun Life Financial clients navigate through the complex and often confusing world of finance. "As a financial advisor at Sun Life Financial, I feel like I make a difference by giving myself the opportunity to help people every day, which lucky for me, is my job," he says.



# Business & Commerce

In 2010, half of Canadian employees worked in business-related industries. Although typical commerce disciplines like accounting, finance and marketing are key employers, so are businesses such as consultancy, corporate communications and human resources. Indeed, graduates with a business degree can find work in a variety of sectors such as arts and culture, natural and applied sciences, government, mining, education and healthcare.

If you are interested in accounting, graduates should obtain a designation, becoming a Certified General Accountant, a Certified Management Accountant or a Chartered Accountant. A mixture of courses, work hours and an exam or exams must be completed in order to gain the designation. Annual salaries are generally high for all three designations, ranging from \$98,600 to a whopping \$186,543. Other possible career opportunities include market researcher, financial analyst, branch manager, payroll and accounting clerk, sales associate, realtor, promotions representative or investment fund specialist.

## What Employers Want



**COLLEEN BAILEY MOFFITT**  
Talent Leader,  
Pricewaterhouse  
Coopers

➔ PricewaterhouseCoopers is best known as an accounting firm, but we're also one of the world's leading professional services firms. While most of our hiring is in accounting, we do hire students from different business backgrounds such as Tax and Consulting & Deals.

Grades are important but we look at the whole person—their involvement in their community, student government and team sports. We appreciate people who bring varied experiences.

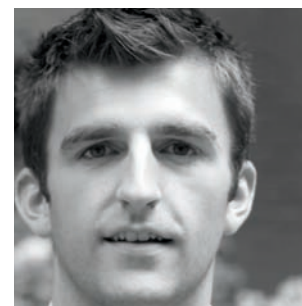
I would like to encourage students to attend our recruitment events on campus during the year. These events are opportunities for students to build a relationship with us, and to get to know what it's like to work at PwC. We also offer a number of summer internships and co-op positions where people can get work experience in their second or third year. If they've done well, a student could go into their fourth year with a full-time job already secured.



**SERGE MATHER**  
Recruitment  
Specialist—Campus,  
CPP Investment  
Board

➔ We're interested in meeting students from varied backgrounds—everything from business and finance to computer science and mathematics. We're looking for students who have a keen interest in the financial markets and are intellectually curious to learn more. Students should learn as much as they can about different areas and companies. It would also be helpful for them to meet with many people within the field who might help with possible internships.

## From Class to Career



**MICHAEL COSTAS**  
Underwriter  
Chubb Insurance  
Bachelor of Commerce,  
Queen's University, 2010

As a student, Costas was interested in a myriad of disciplines—finance, business law, sales and negotiations. But after he participated

in orientation week and a golf tournament that paired students with recruiters in his third year, Costas met representatives from Chubb Insurance Company and spoke with them about the opportunities in the insurance industry.

"Despite never considering a career as an underwriter, I applied for a summer internship and was fortunate enough to get the job," he says. Now 23, Costas works full-time in the Commercial Lines department where he evaluates and analyzes "prospective clients from a financial and risk management perspective to determine if and how we can provide them with insurance."



**STEPHANIE TACCONELLI**  
Assistant Brand Manager,  
Procter & Gamble Canada  
Bachelor of Commerce,  
Queen's University, 2010

After completing an internship with a consumer packaged goods company the summer after her third year, Tacconelli gained a real passion for

marketing and brand management. In her final year, she applied to several companies and landed a job as an Assistant Brand Manager at Procter & Gamble in Toronto. She advises students to really "find something you're passionate about, take ownership over it and use that experience when you're going through the interviewing process," as she did when applying for jobs. The interview process also works both ways, she says. "I was completely inspired by the two women who interviewed me and that's what sold me."



# FOUR-YEAR BACHELOR'S DEGREES

Academic excellence. Industry connections. Research opportunities. Entrepreneurial insights. Practical field experience. That's what you get with each one of Humber's four-year, career-focused bachelor's degree programs.



## Business programs you may not know about...but should:

### ► Bachelor of Arts in Professional Communication

This program examines media, language, culture and technology and prepares graduates for jobs in advertising, marketing, public relations and journalism.  
—Royal Roads University, University of Western Ontario, York University, Trinity Western University

### ► Bachelor of Science in Food Market Analysis

For those students who would like to combine food science with economics and business management.  
—University of British Columbia

### ► Recreation Management and

### Community Development

Brings together economics, the environment and culture.  
—University of Manitoba, Acadia University, Dalhousie University

### ► Administration in Aquatic Resources

Teaches students how to use and manage aquatic resources—an ever important field in Canada. A field camp and work term complement classroom learning.  
—St. Francis Xavier University

### ► Petroleum Land Management

The only one of its kind in Canada and one of six programs worldwide. The program concentrates on training students in legal

agreements, resource exploration and energy analysis. The median wage for 2009 program graduates was \$65,140.  
—University of Calgary

### ► Bachelor of Commerce in Marketing Logistics

Students develop expertise in areas such as e-commerce, e-business, transportation, purchasing and customer service.  
—Dalhousie University

### ► Administration in Aviation

Graduates get a degree, a pilot's license and aviation-specific business training.  
—University of the Fraser Valley, University of Western Ontario

### ► Bachelor of Science in Agribusiness

Gain skills for a career in the \$95-billion Canadian agribusiness industry.  
—University of Saskatchewan, University of Manitoba

### ► Administration Co-Op International Degree Program

Students spend two and half years in Canada and the other one and half years in Germany. Graduates get a Bachelor of Business Administration from Brock and a Bachelor of Science in Management from the European Business School in Germany.  
—Brock University/European Business School joint program

# Knowledge builders

*Canada's universities are known for being dynamic. Over the past two years, however, the pace of work on Canadian campuses across the country has been particularly brisk thanks to 183 projects that transformed outdated, inadequate campus infrastructure into state-of-the-art, world-class facilities.*

their labs and research facilities," says Dr. Gary Goodyear, Minister of State.

"The Knowledge Infrastructure Program was created...to fight the effects of the global economic recession by creating jobs immediately and, at the same time, laying the foundation for future economic growth."

This fall, Open Doors, Open Knowledge will provide Canadians with the opportunity to see the impact of their investment on students, faculty and the broader community.

"Open Doors will take place from November 4 to 13, thanking Canadians by inviting them in to see the results of their transformational investment. There will be campus tours, grand openings and a chance to see the new labs and equipment first-hand," says Paul Davidson, president of the Association of Universities and Colleges of Canada (AUCC).

Universities across the country are getting ready to open their doors as a gesture of thanks to Canadians.

Open Doors, Open Knowledge is the university community's way of saying thank you to Canadians, as well as federal and provincial governments, for their investment in university-based infrastructure.

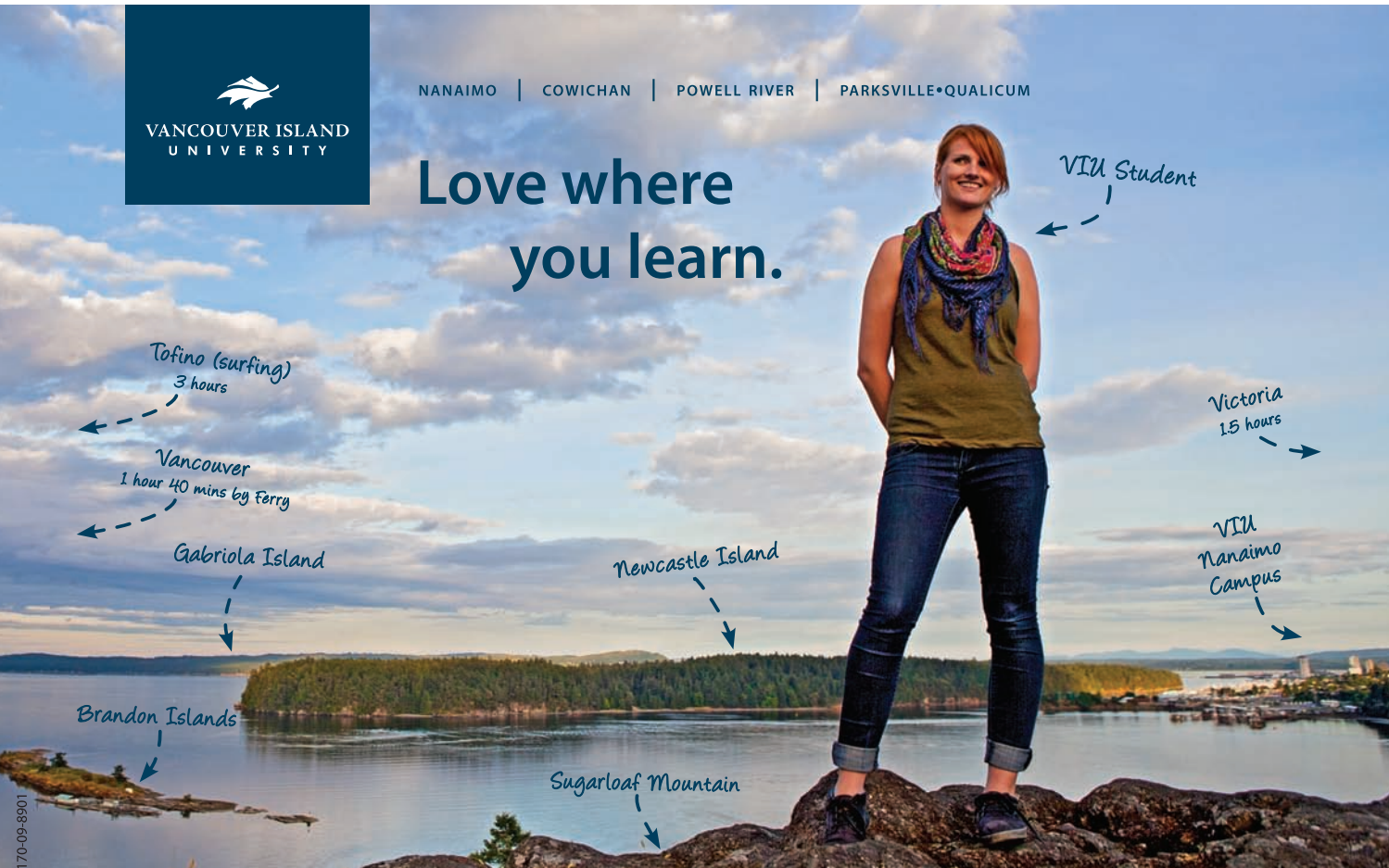
Under the radar of many Canadians, a total of 183

projects have transformed outdated, inadequate campus infrastructure into state-of-the-art labs, world-class facilities, contemporary classrooms, green buildings and projects that meet the needs of specific student groups such as First Nations.

The Knowledge Infrastructure Program (KIP), a part of Canada's \$12-billion Economic Action Plan, was a two-year, \$2-billion measure

to support infrastructure enhancements in post-secondary institutions – \$1.3 billion of which went to university-based projects.

"Science drives our economy. When our government was doing its consultations for the Economic Action Plan, the number one request we received from Canada's universities and colleges was to help them re-build and expand



## Knowledge builders

Events will vary from institution to institution, in many cases involving tours of outstanding new research and teaching facilities and in some cases taking place in conjunction with campus-wide open houses.

Davidson says KIP is an example of both the power of a good idea at a time when the economy needed a significant boost and good public administration by the federal and provincial governments working together to do something quickly and well.

From the time the KIP program was announced in January 2009 to this fall, projects have passed through the ap-

provals process to either full or near-full completion.

Quite a success story. Dr. Wayne Albert, dean of the University of New Brunswick's (UNB) Faculty of Kinesiology, says, in the case of UNB's new multi-purpose wellness centre and human performance lab, "The \$8 million in KIP funding was critical as it demonstrates the government's commitment to health and wellness. As well, it is critical to have government support when seeking donor support as they are more willing to be part of a larger initiative."

He says students at UNB will have the opportunity to

have their undergraduate lab experiences in the new lab, and graduate students will be trained to integrate state-of-the-art equipment in their studies and practices.

Minister Goodyear says Canada's improved facilities will enhance the research and training capacity of Canada's universities, enable them to attract more students, provide a better educational experience for the highly skilled workers of tomorrow and allow our educational institutions to attract and retain the world's top researchers.

"One university president described it as taking

classes and labs built in the Sputnik age and updating them for the 21st century," Davidson says, adding that, with Canada graduating one million university students between now and Canada's 150th anniversary, we can't afford to be complacent.

"We've got to make sure our students have got the tools they need to be equipped for global competition and to learn for life," he says. "Canada has earned a reputation for high-quality research and teaching. This investment in our campus infrastructure helps us maintain our position in the global landscape." ●



## 21<sup>st</sup> century learners, 21<sup>st</sup> century leaders

Join us for an Open House, Tuesday, November 8, 2011  
11am - 4 pm, Concourse Gallery, Vancouver.

ecuad.ca



MAA candidate, Sean Arden, with "Whizard Motion" Time-Lapse Motion Control System. Collaborator: Kris Fortune.

We thank the Knowledge Infrastructure Program and Industry Canada for their investment in an innovative, creative and sustainable future.

# Superior space, superior learning



School of Image Arts

Artist's rendering courtesy of Cicada Design/Diamond and Schmitt Architects.

With \$32.9 million in funding from the Knowledge Infrastructure Program, Ryerson University is transforming its School of Image Arts into a superior facility for new media, documentary media, and cutting-edge film and photography teaching and research. The completely renovated building will provide a state-of-the-art space for students and faculty to learn, research and create, and will also be home to the Ryerson Gallery and Research Centre. With our partners, we're building an outstanding facility for a promising future.

[www.ryerson.ca](http://www.ryerson.ca)



Everyone Makes a Mark

## Knowledge builders

# Good bang for the buck – What government investments in university campuses really mean for Canadians



By Paul Davidson  
President,  
Association of Universities and Colleges of Canada

There was no shortage of shovel-ready projects on Canada's university campuses when the federal government announced its stimulus funding plans back in 2009. With significant needs in deferred maintenance and ambitious plans for campus renewal, our universities were more than ready to partner with the federal and provincial governments in undertaking major construction projects near the begin-

ning of the economic downturn. A total of \$3.2 billion from federal, provincial and other sources was invested in our university campuses. The federal contribution was \$1.3 billion.

The immediate impetus, of course, was to kick-start significant economic activity. In that, the Knowledge Infrastructure Program (KIP) was a tremendous success, but Canadians got so much more from this investment of their tax dollars. The KIP program strengthened Canada's research, innovation and

education capacity in ways that will benefit Canadians for generations to come.

Because of this investment, students across Canada are learning in new, technologically enhanced classrooms. They're conducting research in modern labs. And they're pursuing their studies on more sustainable campuses.

Their learning experience has been enhanced by universities' ability to attract the best and brightest minds from around the world to work in state-of-the-art facilities. Top researchers are

developing cancer treatments and physical rehabilitation techniques in new facilities made possible through this stimulus funding.

Today's world is one of rapid change with much uncertainty. We look to our universities to produce the leaders of tomorrow and drive prosperity. We need our universities to help address challenges such as sustainability in health care, changing labour-market needs, the looming demographic shift and economic uncertainty. And in doing so, our universities are strengthening Canadian quality of life.

The recent stimulus spending on Canada's university campuses responded to the immediate pressures of the global recession and laid the foundations for future prosperity. To learn more about these investments, please visit [www.aucc.ca](http://www.aucc.ca) and watch for events at universities across the country November 4-13, 2011. ●

*We need our universities to help address challenges such as sustainability in health care, changing labour-market needs, the looming demographic shift and economic uncertainty. And in doing so, our universities are strengthening Canadian quality of life."*



## Discovering solutions and protecting health

Many emerging diseases are transmitted between humans and animals

Veterinarians, as the first line of response to diseases that threaten animal health, food safety and public health, need the tools, facilities and support to do the job.

Thanks to \$9.1 million from the Knowledge Infrastructure Program (KIP), the University of Saskatchewan's Western College of Veterinary Medicine is now home to the most comprehensive diagnostics laboratory complex in Western Canada for all animal species.

The state-of-the-art facility allows veterinarians to rapidly diagnose high-risk cases of animal disease and infectious pathogens, and provides space to study diseases such as BSE and chronic wasting disease. The result is reduced risk to public health and minimized economic impact on Western Canada's livestock industry.

Because of the support of the governments of Canada and Saskatchewan through KIP, the U of S is protecting Canada's animal and public health and training the next generation of veterinarians and specialists to do the same.

This report was produced by Randall/Anthony Communications Inc. in conjunction with the advertising department of The Globe and Mail. Richard Deacon, National Business Development Manager, [rdcacon@globeandmail.com](mailto:rdcacon@globeandmail.com).



UNIVERSITY OF SASKATCHEWAN

[www.usask.ca/wcvm](http://www.usask.ca/wcvm)

Drs. Steve Hendrick and John Campbell, members of the Western College of Veterinary Medicine's disease investigation unit.





Karen Chad, vice-president research at the University of Saskatchewan.

## Knowledge builders

University of Saskatchewan

### In Saskatoon, foundations laid for future of education

**R**oof renewal and replacing a buried steam distribution service on campus might not seem like the most exciting ways to invest public money. But Knowledge Infrastructure Program (KIP) investment is not just about bricks and mortar and the associated construction jobs, says Karen Chad, vice-president research at the University of Saskatchewan.

“It’s about laying the foundations for the future for education, research and innovation,” says Chad.

She points out that construction of a concrete steam tunnel six football

fields long is critically important to the work of two of Canada’s major science projects – the Canadian Light Source synchrotron and VIDO-InterVac (Vaccine and Infectious Disease Organization-International Vaccine Centre).

These two U of S centres advance world-class research, teaching and training in areas critical to Canada’s future – such as creating new and improved materials and developing vaccines to protect animal and human health.

“You can’t readily see this investment, but it’s critical all the same,” she said. “The existing steam lines had become so unreliable, they were disrupting critical research activities.

And roof leakages in some of our core buildings were threatening to disrupt classroom and lab activities and cause safety issues.”

At the Western College of Veterinary Medicine on campus, \$9.1 million in KIP funding provides veterinarians and researchers with Western Canada’s most comprehensive diagnostics laboratory complex for all animal species.

“This new state-of-the-art centre will result in faster responses to emerging diseases to protect Canada’s food chain, as well as innovations in diagnostic and clinical techniques and specialized training for the next generation of veterinarians.” ●

## TRANSFORMING OUR CAMPUS



ABOVE: ARTLab

At the University of Manitoba, we are reshaping our physical environment by building new spaces while preserving our rich heritage.

With the financial support of the Government of Canada’s Knowledge Infrastructure Program (KIP), and the Province of Manitoba, we are improving the places where we learn, explore and discover.

**ARTLab**  
The stunning new ARTLab facility will be a hub for creativity and discovery on campus. Budding artists, multimedia creators, photographers and designers will thrive in this space, enjoying 70,000 sq. ft. of art galleries, sound stages, workshops, art collection vaults, digital media labs and studio space.

**Neil John Maclean Health Sciences Library**  
Students, faculty and researchers have access to a larger collection of research, additional group study areas and extra conference rooms, as well as more opportunities to connect with healthcare professionals in our community. The improvements have added 12 research group study rooms, a 24-seat boardroom and six staff offices.

- Other KIP-funded projects on campus include:**
- Biological Sciences Building upgrades
  - Buller Building Science Labs and infrastructure renovation
  - Eureka Incubator expansion
  - Regenerative Medicine Program space renovation
  - Smartpark Lake 2 excavation and naturalization

To learn more about the transformation taking place on the University of Manitoba campus, visit:

[umcommunityreport.ca/infrastructure](http://umcommunityreport.ca/infrastructure)



UNIVERSITY OF MANITOBA

## ASK THE RIGHT QUESTIONS AND YOU COULD CHANGE THE WORLD



## BE PART OF THE THINKING



Funding for these research initiatives is made possible in part by a \$69 million investment from the Government of Canada and the *ministère du Développement économique, de l’Innovation et de l’Exportation du Québec* through the Knowledge Infrastructure Program.

[concordia.ca](http://concordia.ca)



## Knowledge builders

### Efforts strengthening Canada's role in changing global economy

**W**ith an aim to helping Canada further its prospects in an increasingly global economy, Canadian universities are building bridges in some of the world's fastest-rising nations.

Recognized for excellence in inter-university partnerships, Canada's universities are fostering international research collaborations and recruiting

foreign students and researchers.

The Association of Universities and Colleges of Canada (AUCC) has made partnerships with countries such as India and Brazil a key priority.

"It is extremely important to provide students with international experience. Graduates of tomorrow will be working in a much more global world and need the skills to function in a global economy," says Gail Bowkett, assistant director of international relations with AUCC. "Education and research-based exchanges result in the development of those competencies and the building of those linkages."

This year, AUCC is focused on international engagement efforts with Brazil that are modelled after its successful outreach to India in 2010.

In June, AUCC held a two-day workshop called "Advancing Excellence in Strategic Engagement with Bra-

zil," which was attended by over half of its member institutions.

Set to be the fifth largest economy in the world, it is no wonder Brazil is a focus of AUCC's initiatives to strengthen Canada's engagement with economic world powers. Brazil will showcase its burgeoning economy when it plays host to the World Cup in 2014 and the Olympics in 2016.

In the spring of 2012, an AUCC-led Brazilian mission of over 20 Canadian university presidents will be led by Governor General David Johnston.

Last year's mission to India involved 15 presidents from Canadian universities.

"The November 2010, seven-day mission to India was about establishing a brand of excellence for Canadian universities in the Indian market and promoting the depth of opportunities available at Canadian universities that makes them partners of choice for the Indian higher-education sector," says Bowkett, adding that the mission to Brazil has the same underpinnings.

Currently, nearly 20 Canadian universities have India-specific initiatives underway. ●



Heidi Carrubba (centre) is among the dynamic Canadians whose university education helped prepare them for leadership roles in an increasingly globalized world. Photo: supplied

### Students prepare for a world of opportunity

**I**n recognition of the global economy, the University of Western Ontario is investing heavily in creating international opportunities for its students.

"We need a new generation of explorers," says Dr. Lorna Jean Edmonds, Western's newly hired executive director of International Relations. "Our young generation needs to be out in the community in an environment where they can

learn either through research or work experience, not only in Canada, but internationally."

Edmonds says today's students are competing with a global workforce and preparing them can't solely take place on a campus in Canada.

"What makes students marketable is if they have a resumé that says they have worked somewhere else. For example, they've done undergraduate-level research

in a place like India," says Edmonds.

Western currently offers just over 1,100 students the opportunity to go abroad, but less than 10 per cent of those involve work experience or research-based internships. This is poised to change.

"Students want internships because it enables them to explore their future interests in another country while gaining work experience in a company, think tank, NGO

or government organization internationally," says Edmonds. "This allows them to be intellectually, professionally and culturally enriched in their understanding of the opportunities in the global knowledge economy."

Western is focusing on building relationships with countries such as China, India, Brazil, Kenya and Singapore – countries with which Edmonds says economic connections have geopolitical timeliness. ●

# You've given us the chance to be world leaders.

## But our students get so much more.

**THANK YOU FOR MAKING THE TAYLOR FAMILY DIGITAL LIBRARY A REALITY.**

This brand new six story, information-rich facility offers students, faculty, staff, alumni and the broader community access to some of the most sophisticated digital and knowledge creation resources in the country. This exciting state-of-the-art library will ensure our students, faculty and staff continue to be leaders in their fields, making significant contributions to our city, province, country, even the world.

The entire University of Calgary community is grateful for the support from the Government of Canada's Knowledge Infrastructure Program, the Government of Alberta, as well as Don Taylor and his family for making this outstanding project a reality.





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UNIVERSITY OF MANITOBA

connect LEED-certified discovery 2012 living building inspiration

# Centre for Engineering Innovation

exploration teaching future industry

## community partnership

thinking forward-taking action

When the University of Windsor’s Centre for Engineering Innovation opens its doors in the fall of 2012, it will literally live and breathe the theories taught within its state-of-the-art classrooms. Catch our vision for this new address of discovery. Visit [www.uwindsor.ca/cei](http://www.uwindsor.ca/cei)



## Knowledge builders

University of Calgary

### Digital-Age library allows users to tap and create knowledge

**T**he new Taylor Family Digital Library at the University of Calgary is the library of the future, where technology and information converge to better serve the information and learning needs of students, researchers and the community.

The stunning, six-storey complex houses a unique combination of library, university press, student success centre, alumni office

and a new centre for arts and culture, which includes the archives, special collections and art gallery. Since September, thousands of students have been welcomed to the building and a new outdoor community gathering space – the Taylor Quadrangle.

“The entire University of Calgary community is grateful for the support from the Knowledge Infrastructure Program in making this outstanding project a reality,” says Elizabeth Cannon, president.

Over half a million of the latest and most frequently used books, journals and research materials are housed in the building and can be browsed in person or digitally.

The Taylor Family Digital Library is designed to respond to the 24/7 needs of today’s researchers, who need instant access to the latest research from around the world.

“It’s a tremendous opportunity for students, researchers and faculty to engage

with our collections in new ways,” says Tom Hicker-son, vice provost (libraries and cultural resources) and university librarian.

What makes the Taylor Family Digital Library innovative is that it also provides technology for the creation of knowledge in exciting new ways. Editing suites, touch tables, a wall-sized visualization screen, collaborative work rooms and other resources make the library one of the most information-rich facilities in Canada. ●



## UNIVERSITY OPEN DOORS Open Knowledge

For event details, visit: [aucc.ca/opendoors](http://aucc.ca/opendoors) From: **Nov 4-13, 2011**

### Discover a University Campus Near You!

From **November 4-13**, universities across Canada are inviting all Canadians to find out more about recent knowledge infrastructure investments by the federal and provincial governments, and discover the community benefits of these improvements from coast to coast.

**AUCC** 100  
1911-2011  
Association of Universities and Colleges of Canada  
Association des universités et collèges du Canada

At the University of Guelph....

# Sustainability Matters!

UNIVERSITY  
of GUELPH

CHANGING LIVES  
IMPROVING LIFE



### What Was Old Is New Again

The University of Guelph has renovated a 50-year-old building to house a cutting-edge environmental teaching and research centre that will benefit students for years to come.

Thanks to a \$33.6-million investment from the federal and provincial governments, the retrofit will reduce the University’s deferred-maintenance costs, increase energy efficiency and provide barrier-free access to 300 labs, classrooms and offices. The project employed 670 people in the architectural/construction industry and its indirect impact on the Ontario economy was an estimated at \$72.3 million.

Officially opening Nov. 10, Alexander Hall will also help us attract more research support from other agencies and the private sector as the University of Guelph continues to build a better planet.

[www.uoguelph.ca/kip/](http://www.uoguelph.ca/kip/)

## Knowledge builders

Ryerson University

### Spectacular learning centre to grace Toronto's Yonge Street

The spectacularly designed Ryerson Student Learning Centre will be eight storeys of dazzling glass on Toronto's famed Yonge Street.

What goes on inside, however, is what will truly dazzle. Every floor of the centre will have its own unique and inspiring learning environment. Some will be open and interpretive, some will offer enclosed study rooms that accommodate groups, and others will facilitate independent study.

The new centre is expected to be complete by the winter of 2014, and will be home to Ryerson's Student Learning Support services.

"We're going to be on the fourth floor. There will be a large reception area where students can ask for help getting connected with the learning support service that best suits their needs," says Dr. Christina Halliday, director of Student Learning Support at Ryerson.

Students will be able to access Ryerson's Writing Centre, English-Lan-

guage Support area, Math Assistance Centre, Access Centre for Students with Disabilities, and the Learning Success Centre all in one location.

"The Learning Support units on campus are about helping students learn the skills they need to become successful students," says Halliday. "For instance, the Learning Success Centre offers workshops on effective note taking, time management, how to read a text book effectively, how to prepare for an exam, and how to manage test anxiety."

With full digital support in the new building, Halliday says students accessing Learning Support services will be able to use their everyday modes of communication such as iPods, iPads, the Internet and smartphones to register for services, complete skill-learning modules and get one-on-one help. ●



Ryerson University's impressive Student Learning Centre is expected to be complete by winter 2014. Photo: supplied

Concordia University

### KIP projects add heft to Montreal innovation capacity

Through the Knowledge Infrastructure Program (KIP), Concordia University's quest for research excellence got a boost when it became home to three new and highly innovative research facilities.

Dr. Louise Dandurand, Concordia's vice-president of research and graduate studies, says the investment is an important development for the entire Montreal area, given the multidisciplinary and multi-institutional nature of today's research activities.

Concordia's new 26,000-square-foot PERFORM Centre – an acronym for Prevention, Evaluation, Rehabilitation and FORMation – is home to

an athletic therapy teaching clinic, a cardiopulmonary evaluation suite, a clinical analysis suite, a conditioning and rehabilitation centre, a functional assessment laboratory, a nutrition suite and a medical imaging suite.

"PERFORM is uniquely equipped to open up the research agenda in population health and the prevention of some of today's greatest challenges to health and longevity," says Dandurand. The university's new Centre for Structural and Functional Genomics opened in August.

"Most of the current research activities focus on microbial genomics to monitor and predict environmental changes, harness the genetic potential of

micro-organisms to develop biomass-derived fuels and materials, and develop environmentally sustainable processes for the forestry and agricultural industries," says Dandurand.

Finally, the Solar Simulator and Environmental Chamber is one-of-a-kind in the world, Dandurand says, and will enable experiments over a matter of days that would take months to complete outdoors.

The chamber, with its integrated solar simulator, facilitates research into gathering and storing solar energy, and the optimal

use of natural light in buildings. Building envelopes will be tested on their ability to store heat and resist freeze/thaw damage, air infiltration, condensation and other adverse conditions. Composite materials and structures such as floors and windows will also be tested. ●



Concordia University's PERFORM Centre focuses on multidisciplinary population health research and teaching. Photo: supplied

Sherbrooke University

### Quebec school hones microelectronics R&D expertise

Often it's finding a niche area of expertise that can lead to the greatest success. That's what the MiQro Innovation Collaborative Centre (C2MI) has done.

Sherbrooke University will have C2MI online this fall, carrying out research and development on the packaging of micro systems and electronic microchips.

Close to 250 scientists are expected to be active in the MiQro centre when the

Bromont, Quebec, facility opens.

"We worked on an international basis with other groups in Europe and the U.S. to make sure this centre was complementary to what is out there. As a result, C2MI is a world-leading research centre in this area," says Dr. Jacques Beauvais, vice-president of research at Sherbrooke.

The focus of C2MI will be to develop new technologies for cutting out microchips, linking them electronically to innova-

tive packages, managing heat dissipation, testing them and preparing them for shipment. The centre will also work on designing packages for future generations of microelectromechanical systems.

C2MI is equipped with \$135 million of equipment and was \$83 million to build.

"The benefits are many. Given that this is industry driven, our students have access to real problems and work with industry on real solutions in a state-of-the-art facility," says Beauvais.

"Canada has a lot of knowledge in materials research and in microelectronics in general. At this centre, we will make the connection between industry and its challenges and the academics that have the solutions."

Funding for C2MI came from Industry Canada's Knowledge Infrastructure Program, Quebec's Ministère du Développement économique, l'Innovation et l'Exportation among other partners and equipment suppliers. ●



UNIVERSITY OF ALBERTA

Finding a cure for Type 1 diabetes

Studying the health of Canada's aquatic habitats

Developing treatments and cures for virus-based diseases like hepatitis

Reducing the environmental impact of oilsands production

Thanks to major funding from Industry Canada's Knowledge Infrastructure Program, the U of A attracts the best scientists—including Canada Excellence Research Chairs—who are tackling some of Canada's and the world's most pressing challenges. U of A people, working in places like the Li Ka Shing Centre for Health Research Innovation and the Katz Group Centre for Pharmacy and Health Research, transform lives every day.

At the University of Alberta, KIP funding fuels the public good every day.

ualberta.ca

## Knowledge builders

University of Windsor

### Windsor-Essex region's industrial R&D power to get a boost

The University of Windsor is in phase one of a two-phase plan to complete a new Centre for Engineering Innovation by next summer.

The centre will not only be home to the university's Faculty of Engineering, the 300,000-square-foot, LEED (Leadership in Energy and Environmental Design) gold-certified building will

have an economic impact throughout the region.

"The Windsor-Essex region has been a manufacturing heartland in Canada and, as such, was linked to the automotive sector. With the changes in the economy and challenges of the automotive sector, we need to diversify our manufacturing capacity into things such as alternative energy, environ-

mental sustainability, lighter materials and more efficient manufacturing systems," says Dr. Alan Wildeman, president and vice-chancellor of the University of Windsor.

Wildeman says the Centre for Engineering Innovation helps address the opportunities in the region and enables the Faculty of Engineering

to work with industry, create jobs and help companies innovate.

The project will cost an estimated \$112 million, but is expected to have a total direct and indirect economic impact of \$270 million over three years in addition to creating 1,632 construction jobs.

The centre will be a living building, where students can learn from the electrical, mechanical, civil and environmental engineering systems throughout.

"Over all areas of engineering, this facility is designed to make it easier to work with industry inside our building and provide training and experience to our students," says Wildeman.

An Industrial Courtyard will team the university's talent, research and technological resources with the private sector, serving as a place where ideas can be developed into market-ready solutions. ●



The new LEED Gold-certified Centre for Engineering Innovation at the University of Windsor will address broad challenges facing the automotive sector. Photo: supplied

University of Manitoba

### State-of-the-art facility a forum for artistic advancement

Winnipeg's vibrant arts community is about to get a boost. The University of Manitoba's ARTLab (Art Research Technology Lab), a multidisciplinary art and

technology centre, is poised to open this November.

The \$30-million, 70,000-square-foot, LEED-silver facility will house the School of Art, bringing together art, multimedia and design facilities in a structure

that is in itself a work of art.

"It is very transparent, so the activities in the building can be viewed from the outside, with gallery space, studio space and a glass curtain wall on the north side of the building," says Dr. David

Barnard, president and vice-chancellor at the University of Manitoba.

ARTLab will also house a soundstage, workshop space, digital labs, a lecture theatre and state-of-the-art storage vaults. ●

Royal Roads University

### New facility fosters global dialogue, education

Royal Roads University (RRU) is home to a new Learning and Innovation Centre that was specially designed to support the unique interactive learning model that accommodates RRU's average student.

"They are, on average, 40 years old, working full-time and tend to be on

campus for short residencies," says Dr. Allan Cahoon, president and vice-chancellor of RRU.

The \$20-million, LEED (Leadership in Energy and Environmental Design) gold-certified centre has been open since last May, and its fourth-floor Centre for Dialogue has already hosted many university presidents at an As-

sociation of Universities and Colleges of Canada meeting.

"This building is a tangible indication of the value of our use of technology and unique learning model to foster dialogue nationally and internationally between students, faculty and business leaders around the world," says Cahoon. ●



**Research**  
is part  
of the program

**Succeeding**  
by shaping the future of technology.

Based on several university-industry partnerships, the MiQro Innovation Collaborative Centre (C2MI) will be an international pioneer in packaging the next generation of microchips and will play an essential role in the microelectronics ecosystem of the North-East Continent.

USherbrooke.ca/c2mi-en

UNIVERSITÉ DE  
**SHERBROOKE**

## Knowledge builders

University of Guelph

### Sustainability initiatives aim to foster greener community

Although the University of Guelph has been committed to environmental initiatives since the '70s, its passion for conservation has not quelled over the years.

The university has undertaken some Canadian firsts, such as a 2007 student referendum that resulted in a student body commitment to give \$10 each per semester for 12 years to an Energy Conservation Fund.

These, along with additional donations from staff, faculty, retirees and alumni, were matched by the U of G – resulting in a pledge of more than \$5 million.

The fund's first project was a retrofit of the U of G library's lighting, which cut energy costs in half. Since then, six other campus buildings have undergone lighting retrofits.

The University of Guelph's Community Energy Plan guides its campus-

based conservation efforts.

"As the largest employer in the city, we are a huge user of energy and belong, front and centre, in these issues," says Dr. Alastair Summerlee, U of G's president.

In honour of that responsibility, the campus agreed to be charged for its water consumption based on use. "That created a sharp impetus to reduce our water use. By 2013, we'll be at 50 per cent less than 2005,"

says Summerlee.

The university has retrofitted four of its main buildings and all of its residences; is in talks with Guelph Hydro about a co-generation, waste-to-energy facility; and is on the verge of opening a permanent sustainability office.

As well, students are engaged in researching the effectiveness of the solar panels and wind turbine in use atop the engineering building. ●

Emily Carr University

### Iconic art school seeks to meet demands of creative economy

Emily Carr University of Art and Design has outgrown its current Granville Island, Vancouver location.

"Over the last 15 years, we've grown from 800 to 2,000 full-time students," says Dr. Ron Burnett, the university's president and vice-chancellor.

Burnett is awaiting Province of B.C. approval to develop the Great Northern Way Campus on 18 acres of land in East Vancouver that was donated to Emily Carr, UBC, SFU and BCIT



Emily Carr University of Art and Design students and faculty utilize sophisticated facilities such as its Stereoscopic 3D Centre, pictured above. Photo: Jeff Vinnick

by Finning International in 2001.

"The Conference Board of Canada says our creative economy is responsible for six to eight per cent of the national GDP," says Burnett. "To build something that will serve existing and future demand and spur economic development through the cultural sector is of significant value."

Emily Carr ultimately plans to build a \$135-million, 350,000-square-foot LEED (Leadership in Energy and Environmental Design) gold-certified building by 2015. ●

University of Alberta

### Alberta innovators tackle infectious disease

The World Health Organization estimates that one-third of deaths annually are due to infectious diseases, many of which are viruses.

Researchers at the University of Alberta's new Li Ka Shing Institute of Virology

are addressing the issue, working to get new antiviral drugs to market.

Dr. Lorne Tyrrell, director of the institute, developed the world's first oral antiviral drug for hepatitis B, and recent recruit Dr. Michael Houghton led the team that

discovered the hepatitis C virus and developed the diagnostic test that keeps Canada's blood supply hepatitis C free.

"The University of Alberta and Province of Alberta had great vision when they built the Health Research Innova-

tion Facility," says Dr. Lorne Babiuk, vice-president of research at U of A. "It allowed us to attract renowned researchers, international partnerships and a total of \$150 million in combined funding to complete the institute." ●

## THE RESULTS

# WHAT IT TAKES TO MAKE THE GRADE

Ten years of our student survey have shown that the best-liked schools make their students feel that they are in a modern, nurturing learning environment

BY ALEX USHER

When the *Canadian University Report* survey was introduced a decade ago, it was not to universal acclaim from the universities themselves. A major criticism at the outset was the sample selection process, which involved finding students from each school via a scholarships website database. Over time, we worked to address this criticism by working with institutions to get a better sample of their students directly through their own databases. Now, close to 95% of our sample comes through such partnerships.

Another criticism was that student views on institutional services weren't valid, many said, as they had no idea what was available at any school other than their own. That's true to some extent—but if year after year a particular institution gets results which are particularly good or particularly bad compared to other institutions of its type, then the results start to gain in validity. And so it has proved—CUR results are highly reliable, year-on-year, and schools that have invested heavily in the student experience (hello, Western!) have been consistently rewarded accordingly.

A final criticism was that institution-wide rankings were too broad to be useful, given how much of the student experience is specific to an individual program or faculty. That's a fair point, so last year, armed with the much larger survey samples available to us from our partnership with institutions, we began publishing some results by field of study.

Though some schools have risen and others fallen over time, overall, students report being mostly satisfied with their institutions. There are differences, of course, notably that students at smaller schools tend to report much higher levels of satisfaction than students at larger ones. That's something that most sociological theory would have predicted—people like feeling like "connected insiders", and that's much easier to achieve at small schools than at big ones—but even controlling for size, there are some significant differences between institutions. That's one of the reasons we portray schools by size; to better show institutions against their real peers.

Of course, small schools don't have everything their own way. When it comes to things like teaching, school spirit and (for reasons we don't completely understand) campus buildings and facilities, they have a clear advantage over their larger brethren. But when it comes to things like information technology and career preparation, small schools lose their advantage, as students give all institutions relatively low marks on those fronts. And, interestingly, the aspects of student life with which students express the most dissatisfaction—the availability of jobs and affordable housing—are the ones over which institutions have almost no control.

One piece of good news from this year's survey, especially if you're a concerned parent watching a student go off to school for the

first time, is that students gave their schools overwhelmingly positive marks for safety and security. Ninety per cent of schools received an A- rating or higher and only one school (York, for fairly obvious reasons) got less than a B+.

Over the ten years of the CUR, there has been a steady shift in the way institutions have reacted to satisfaction surveys. For one thing, institutions have come to see themselves as being in much greater competition with one another for tuition dollars. For another, highly mobile international students become ever more important to university budgets (in case you were wondering, international students tend to rate their schools the same way domestic students do).

The upshot of all this is that universities are listening to their students more than ever before. And comparative report cards like this one are a chance to give pride of place to institutions doing the best jobs of that.

As a result, the schools that come top in these ratings aren't necessarily the ones with long histories and illustrious alumni. Rather they're the ones that make their students feel that they are in a modern, nurturing learning environment.

And that's really what we want from our schools—isn't it?

Alex Usher is president of Higher Education Strategy Associates

# METHODOLOGY

This year's Canadian University Report survey reflects the opinion of 33,000 current undergraduate students. The results are derived from answers to approximately 100 questions. A number of strict controls were built into the process to help ensure that those included in the sample represent Canadian undergraduates. The data were furthered weighted to reflect the gender split of the actual undergraduate student population at each participating institution. A mean score for each university is calculated for each question based on the responses of students who attend that school. Universities are assigned a letter grade that matches their mean scores (out of a maximum of 9.0) for each variable. The letter grading is based on the following grid:

<b>A+</b>	=	8.2 or greater
<b>A</b>	=	7.8 to 8.2
<b>A-</b>	=	7.4 to 7.8
<b>B+</b>	=	7.0 to 7.4
<b>B</b>	=	6.6 to 7
<b>B-</b>	=	6.2 to 6.6
<b>C+</b>	=	5.8 to 6.2
<b>C</b>	=	5.4 to 5.8
<b>C-</b>	=	5.0 to 5.4
<b>D</b>	=	Less than 5.0

This approach to grading was developed from analyzing the distribution of mean scores from an index variable, which was developed from an aggregate score based on each of the measurements of satisfaction about the university experience examined in the survey. The grid was then applied to the mean score of the responses received from each university, for each variable, and grades were assigned based on the mean score received. Because sample sizes are significantly smaller when comparing one university to another, there may not be statistically significant differences separating universities that receive different letter grades, although their mean scores are different.

FOR THE FULL DATABASE OF RESULTS, GO TO [GLOBEANDMAIL.COM/EDUCATION](http://GLOBEANDMAIL.COM/EDUCATION)

## MOST SATISFIED STUDENTS

### LARGE (Enrolment over 22,000)

University of Western Ontario	<b>A-</b>
University of British Columbia	<b>B+</b>
McMaster University	<b>B+</b>
University of Waterloo	<b>B+</b>
University of Alberta	<b>B</b>
Carleton University	<b>B</b>
Concordia University	<b>B</b>
McGill University	<b>B</b>
Ryerson University	<b>B</b>
University of Calgary	<b>B-</b>
University of Manitoba	<b>B-</b>
University of Ottawa	<b>B-</b>
University of Toronto - St. George	<b>B-</b>
York University	<b>C+</b>

### MEDIUM (Enrolment 10,000 – 22,000)

Queen's University	<b>A</b>
University of Guelph	<b>A-</b>
Mount Royal University	<b>A-</b>
Université de Sherbrooke	<b>A-</b>
Dalhousie University	<b>B+</b>
University of Victoria	<b>B+</b>
Wilfrid Laurier University	<b>B+</b>
Brock University	<b>B</b>
Memorial University of Newfoundland	<b>B</b>
University of Saskatchewan	<b>B</b>
Simon Fraser University	<b>B</b>
University of Regina	<b>B-</b>
University of Windsor	<b>B-</b>
University of Toronto - Mississauga	<b>C+</b>

### SMALL (Enrolment 4,000 – 10,000)

Grant MacEwan University	<b>A-</b>
St. Francis Xavier University	<b>A-</b>
University of the Fraser Valley	<b>B+</b>
University of Lethbridge	<b>B+</b>
Nipissing University	<b>B+</b>
University of Prince Edward Island	<b>B+</b>
Thompson Rivers University	<b>B+</b>
Trent University	<b>B+</b>
Kwantlen Polytechnic University	<b>B</b>
University of New Brunswick - Fredericton	<b>B</b>
University of Ontario Institute of Tech.	<b>B</b>
Saint Mary's University	<b>B</b>
Vancouver Island University	<b>B</b>
University of Winnipeg	<b>B</b>
Lakehead University	<b>B-</b>
Laurentian University	<b>B-</b>
University of Toronto - Scarborough	<b>C+</b>

### VERY SMALL (Enrolment under 4,000)

Acadia University	<b>A</b>
Redeemer University College	<b>A</b>
Trinity Western University	<b>A</b>
University of Western Ontario - Huron	<b>A</b>
Concordia University College of Alberta	<b>A-</b>
Mount Allison University	<b>A-</b>
St. Thomas University	<b>A-</b>
The King's University College (Edmonton)	<b>A-</b>
University of Western Ontario - Brescia	<b>A-</b>
University of Western Ontario - King's	<b>A-</b>
Brandon University	<b>B+</b>
University of Northern British Columbia	<b>B+</b>
Cape Breton University	<b>B</b>
Mount Saint Vincent University	<b>B</b>
OCAD University	<b>B-</b>

## QUALITY OF TEACHING & LEARNING

### LARGE

University of Western Ontario	<b>A-</b>
University of British Columbia	<b>B+</b>
Carleton University	<b>B+</b>
McMaster University	<b>B+</b>
Ryerson University	<b>B+</b>
University of Waterloo	<b>B+</b>
University of Alberta	<b>B</b>
Concordia University	<b>B</b>
University of Manitoba	<b>B</b>
McGill University	<b>B</b>
University of Toronto - St. George	<b>B</b>
University of Calgary	<b>B-</b>
University of Ottawa	<b>B-</b>
York University	<b>B-</b>

### MEDIUM

Mount Royal University	<b>A</b>
University of Guelph	<b>A-</b>
Queen's University	<b>A-</b>
Brock University	<b>B+</b>
Dalhousie University	<b>B+</b>
Memorial University of Newfoundland	<b>B+</b>
University of Saskatchewan	<b>B+</b>
Université de Sherbrooke	<b>B+</b>
University of Victoria	<b>B+</b>
Wilfrid Laurier University	<b>B+</b>
University of Regina	<b>B</b>
Simon Fraser University	<b>B</b>
University of Toronto - Mississauga	<b>B</b>
University of Windsor	<b>B</b>

### SMALL

University of the Fraser Valley	<b>A-</b>
Grant MacEwan University	<b>A-</b>
University of Lethbridge	<b>A-</b>
Nipissing University	<b>A-</b>
St. Francis Xavier University	<b>A-</b>
Trent University	<b>A-</b>
University of Winnipeg	<b>A-</b>
Kwantlen Polytechnic University	<b>B+</b>
University of Prince Edward Island	<b>B+</b>
Saint Mary's University	<b>B+</b>
Thompson Rivers University	<b>B+</b>
Vancouver Island University	<b>B+</b>
Lakehead University	<b>B</b>
Laurentian University	<b>B</b>
University of New Brunswick - Fredericton	<b>B</b>
University of Ontario Institute of Tech.	<b>B</b>
University of Toronto - Scarborough	<b>B</b>

### VERY SMALL

Trinity Western University	<b>A+</b>
Acadia University	<b>A</b>
Concordia University College of Alberta	<b>A</b>
Redeemer University College	<b>A</b>
The King's University College (Edmonton)	<b>A</b>
University of Western Ontario - Huron	<b>A</b>
University of Western Ontario - King's	<b>A</b>
Mount Allison University	<b>A-</b>
St. Thomas University	<b>A-</b>
University of Western Ontario - Brescia	<b>A-</b>
Brandon University	<b>B+</b>
Cape Breton University	<b>B+</b>
Mount Saint Vincent University	<b>B+</b>
University of Northern British Columbia	<b>B+</b>
OCAD University	<b>B-</b>

## INSTRUCTORS' TEACHING STYLE

### LARGE

McMaster University	<b>B+</b>
University of Western Ontario	<b>B+</b>
University of British Columbia	<b>B</b>
Carleton University	<b>B</b>
Concordia University	<b>B</b>
University of Manitoba	<b>B</b>
Ryerson University	<b>B</b>
University of Waterloo	<b>B</b>
University of Alberta	<b>B-</b>
University of Calgary	<b>B-</b>
McGill University	<b>B-</b>
University of Toronto - St. George	<b>B-</b>
York University	<b>B-</b>
University of Ottawa	<b>C+</b>

### MEDIUM

Mount Royal University	<b>A-</b>
University of Guelph	<b>B+</b>
Queen's University	<b>B+</b>
Université de Sherbrooke	<b>B+</b>
University of Victoria	<b>B+</b>
Wilfrid Laurier University	<b>B+</b>
Brock University	<b>B</b>
Dalhousie University	<b>B</b>
Memorial University of Newfoundland	<b>B</b>
University of Saskatchewan	<b>B</b>
Simon Fraser University	<b>B</b>
University of Toronto - Mississauga	<b>B</b>
University of Windsor	<b>B</b>
University of Regina	<b>B-</b>

### SMALL

University of the Fraser Valley	<b>A-</b>
Grant MacEwan University	<b>A-</b>
Nipissing University	<b>A-</b>
St. Francis Xavier University	<b>A-</b>
Kwantlen Polytechnic University	<b>B+</b>
University of Lethbridge	<b>B+</b>
University of Prince Edward Island	<b>B+</b>
Thompson Rivers University	<b>B+</b>
Trent University	<b>B+</b>
Vancouver Island University	<b>B+</b>
University of Winnipeg	<b>B+</b>
Lakehead University	<b>B</b>
University of New Brunswick - Fredericton	<b>B</b>
University of Ontario Institute of Tech.	<b>B</b>
Saint Mary's University	<b>B</b>
University of Toronto - Scarborough	<b>B</b>
Laurentian University	<b>B-</b>

### VERY SMALL

Redeemer University College	<b>A</b>
Trinity Western University	<b>A</b>
University of Western Ontario - Huron	<b>A</b>
Acadia University	<b>A-</b>
Concordia University College of Alberta	<b>A-</b>
Mount Allison University	<b>A-</b>
The King's University College (Edmonton)	<b>A-</b>
University of Western Ontario - Brescia	<b>A-</b>
University of Western Ontario - King's	<b>A-</b>
Brandon University	<b>B+</b>
Cape Breton University	<b>B+</b>
Mount Saint Vincent University	<b>B+</b>
St. Thomas University	<b>B+</b>
University of Northern British Columbia	<b>B</b>
OCAD University	<b>B</b>

## STUDENT-FACULTY INTERACTION

### LARGE

Carleton University	<b>B+</b>
McMaster University	<b>B+</b>
Ryerson University	<b>B+</b>
University of Western Ontario	<b>B+</b>
University of Alberta	<b>B</b>
University of British Columbia	<b>B</b>
Concordia University	<b>B</b>
University of Manitoba	<b>B</b>
McGill University	<b>B</b>
University of Waterloo	<b>B</b>
University of Calgary	<b>B-</b>
University of Ottawa	<b>B-</b>
University of Toronto - St. George	<b>B-</b>
York University	<b>C+</b>

### MEDIUM

Mount Royal University	<b>A</b>
University of Guelph	<b>A-</b>
Queen's University	<b>A-</b>
Université de Sherbrooke	<b>A-</b>
Brock University	<b>B+</b>
Dalhousie University	<b>B+</b>
University of Saskatchewan	<b>B+</b>
University of Victoria	<b>B+</b>
Wilfrid Laurier University	<b>B+</b>
Memorial University of Newfoundland	<b>B</b>
University of Regina	<b>B</b>
Simon Fraser University	<b>B</b>
University of Toronto - Mississauga	<b>B</b>
University of Windsor	<b>B</b>

### SMALL

Nipissing University	<b>A</b>
St. Francis Xavier University	<b>A</b>
University of the Fraser Valley	<b>A-</b>
Grant MacEwan University	<b>A-</b>
University of Lethbridge	<b>A-</b>
Trent University	<b>A-</b>
Vancouver Island University	<b>A-</b>
University of Winnipeg	<b>A-</b>
Lakehead University	<b>B+</b>
Laurentian University	<b>B+</b>
University of Ontario Institute of Tech.	<b>B+</b>
University of Prince Edward Island	<b>B+</b>
Saint Mary's University	<b>B+</b>
Thompson Rivers University	<b>B+</b>
Kwantlen Polytechnic University	<b>B</b>
University of New Brunswick - Fredericton	<b>B</b>
University of Toronto - Scarborough	<b>B-</b>

### VERY SMALL

Acadia University	<b>A+</b>
Redeemer University College	<b>A+</b>
The King's University College (Edmonton)	<b>A+</b>
Trinity Western University	<b>A+</b>
Concordia University College of Alberta	<b>A</b>
University of Western Ontario - Brescia	<b>A</b>
University of Western Ontario - Huron	<b>A</b>
Brandon University	<b>A-</b>
Mount Allison University	<b>A-</b>
University of Northern British Columbia	<b>A-</b>
St. Thomas University	<b>A-</b>
University of Western Ontario - King's	<b>A-</b>
Cape Breton University	<b>B+</b>
Mount Saint Vincent University	<b>B+</b>
OCAD University	<b>B-</b>







**THE RESULTS**

**ENVIRONMENTAL COMMITMENT**

**LARGE (Enrolment over 22,000)**

University of British Columbia	<b>B+</b>
Concordia University	<b>B</b>
McMaster University	<b>B</b>
University of Western Ontario	<b>B</b>
University of Alberta	<b>B-</b>
University of Calgary	<b>B-</b>
Carleton University	<b>B-</b>
McGill University	<b>B-</b>
University of Ottawa	<b>B-</b>
Ryerson University	<b>B-</b>
University of Toronto - St. George	<b>B-</b>
University of Waterloo	<b>B-</b>
University of Manitoba	<b>C+</b>
York University	<b>C+</b>

**MEDIUM (Enrolment 10,000 – 22,000)**

University of Guelph	<b>A</b>
Université de Sherbrooke	<b>A</b>
Queen's University	<b>B+</b>
University of Victoria	<b>B+</b>
Dalhousie University	<b>B</b>
Mount Royal University	<b>B</b>
Simon Fraser University	<b>B</b>
University of Toronto - Mississauga	<b>B</b>
Wilfrid Laurier University	<b>B</b>
Brock University	<b>B-</b>
Memorial University of Newfoundland	<b>B-</b>
University of Saskatchewan	<b>B-</b>
University of Windsor	<b>B-</b>
University of Regina	<b>C</b>

**SMALL (Enrolment 4,000 – 10,000)**

Trent University	<b>A-</b>
University of Winnipeg	<b>A-</b>
Grant MacEwan University	<b>B+</b>
University of Ontario Institute of Tech.	<b>B+</b>
Saint Mary's University	<b>B+</b>
University of the Fraser Valley	<b>B</b>
Lakehead University	<b>B</b>
St. Francis Xavier University	<b>B</b>
Vancouver Island University	<b>B</b>
Kwantlen Polytechnic University	<b>B-</b>
Laurentian University	<b>B-</b>
University of Lethbridge	<b>B-</b>
Nipissing University	<b>B-</b>
University of Prince Edward Island	<b>B-</b>
Thompson Rivers University	<b>B-</b>
University of Toronto - Scarborough	<b>B-</b>
University of New Brunswick - Fredericton	<b>C+</b>

**VERY SMALL (Enrolment under 4,000)**

University of Northern British Columbia	<b>A</b>
Acadia University	<b>A-</b>
Redeemer University College	<b>A-</b>
The King's University College (Edmonton)	<b>A-</b>
Mount Allison University	<b>B+</b>
Trinity Western University	<b>B+</b>
University of Western Ontario - King's	<b>B+</b>
Brandon University	<b>B</b>
Cape Breton University	<b>B</b>
Concordia University College of Alberta	<b>B</b>
Mount Saint Vincent University	<b>B</b>
University of Western Ontario - Brescia	<b>B</b>
University of Western Ontario - Huron	<b>B</b>
OCAD University	<b>B-</b>
St. Thomas University	<b>C+</b>

**WORK-PLAY BALANCE**

**LARGE**

University of Western Ontario	<b>A-</b>
Carleton University	<b>B</b>
McMaster University	<b>B</b>
University of British Columbia	<b>B-</b>
Concordia University	<b>B-</b>
University of Manitoba	<b>B-</b>
McGill University	<b>B-</b>
University of Ottawa	<b>B-</b>
Ryerson University	<b>B-</b>
University of Waterloo	<b>B-</b>
University of Alberta	<b>C+</b>
University of Calgary	<b>C+</b>
York University	<b>C</b>
University of Toronto - St. George	<b>D</b>

**MEDIUM**

University of Guelph	<b>A-</b>
Queen's University	<b>A-</b>
Wilfrid Laurier University	<b>B+</b>
Brock University	<b>B</b>
Mount Royal University	<b>B</b>
Dalhousie University	<b>B-</b>
Memorial University of Newfoundland	<b>B-</b>
Université de Sherbrooke	<b>B</b>
University of Victoria	<b>B</b>
University of Saskatchewan	<b>B-</b>
University of Windsor	<b>B-</b>
University of Regina	<b>C+</b>
Simon Fraser University	<b>C+</b>
University of Toronto - Mississauga	<b>C-</b>

**SMALL**

Nipissing University	<b>A-</b>
St. Francis Xavier University	<b>A-</b>
Trent University	<b>B+</b>
University of the Fraser Valley	<b>B</b>
Grant MacEwan University	<b>B</b>
Laurentian University	<b>B</b>
University of Lethbridge	<b>B</b>
University of Prince Edward Island	<b>B</b>
Saint Mary's University	<b>B</b>
Lakehead University	<b>B-</b>
University of New Brunswick - Fredericton	<b>B-</b>
University of Ontario Institute of Tech.	<b>B-</b>
Thompson Rivers University	<b>B-</b>
Vancouver Island University	<b>B-</b>
University of Winnipeg	<b>B-</b>
Kwantlen Polytechnic University	<b>C+</b>
University of Toronto - Scarborough	<b>C</b>

**VERY SMALL**

Redeemer University College	<b>A</b>
Acadia University	<b>A-</b>
The King's University College (Edmonton)	<b>A-</b>
Trinity Western University	<b>A-</b>
University of Western Ontario - Huron	<b>A-</b>
University of Western Ontario - King's	<b>A-</b>
Concordia University College of Alberta	<b>B+</b>
Mount Allison University	<b>B+</b>
St. Thomas University	<b>B+</b>
University of Western Ontario - Brescia	<b>B+</b>
Brandon University	<b>B</b>
Cape Breton University	<b>B</b>
Mount Saint Vincent University	<b>B-</b>
University of Northern British Columbia	<b>B-</b>
OCAD University	<b>C+</b>

**CITY SATISFACTION**

**LARGE**

McGill University	<b>A</b>
Concordia University	<b>A-</b>
University of Ottawa	<b>A-</b>
Ryerson University	<b>A-</b>
University of British Columbia	<b>B+</b>
Carleton University	<b>B+</b>
University of Toronto - St. George	<b>B+</b>
University of Western Ontario	<b>B+</b>
University of Waterloo	<b>B</b>
University of Alberta	<b>B-</b>
University of Calgary	<b>B-</b>
University of Manitoba	<b>B-</b>
McMaster University	<b>B-</b>
York University	<b>B-</b>

**MEDIUM**

Dalhousie University	<b>A-</b>
University of Guelph	<b>A-</b>
Queen's University	<b>A-</b>
Université de Sherbrooke	<b>A-</b>
Mount Royal University	<b>B+</b>
University of Saskatchewan	<b>B+</b>
University of Victoria	<b>B+</b>
Brock University	<b>B</b>
Memorial University of Newfoundland	<b>B</b>
Simon Fraser University	<b>B</b>
Wilfrid Laurier University	<b>B</b>
University of Regina	<b>B-</b>
University of Toronto - Mississauga	<b>B-</b>
University of Windsor	<b>C+</b>

**SMALL**

Grant MacEwan University	<b>B+</b>
St. Francis Xavier University	<b>B+</b>
Saint Mary's University	<b>B+</b>
University of Lethbridge	<b>B</b>
University of New Brunswick - Fredericton	<b>B</b>
Nipissing University	<b>B</b>
University of Prince Edward Island	<b>B</b>
Thompson Rivers University	<b>B</b>
Trent University	<b>B</b>
University of Winnipeg	<b>B</b>
University of the Fraser Valley	<b>B-</b>
Kwantlen Polytechnic University	<b>B-</b>
Lakehead University	<b>B-</b>
University of Toronto - Scarborough	<b>C+</b>
Vancouver Island University	<b>C+</b>
Laurentian University	<b>C</b>
University of Ontario Institute of Tech.	<b>C</b>

**VERY SMALL**

Acadia University	<b>A-</b>
Redeemer University College	<b>A-</b>
Brandon University	<b>B+</b>
Mount Saint Vincent University	<b>B+</b>
OCAD University	<b>B+</b>
St. Thomas University	<b>B+</b>
University of Western Ontario - Brescia	<b>B+</b>
University of Western Ontario - Huron	<b>B+</b>
University of Western Ontario - King's	<b>B+</b>
Concordia University College of Alberta	<b>B</b>
Mount Allison University	<b>B</b>
The King's University College (Edmonton)	<b>B</b>
Trinity Western University	<b>B</b>
Cape Breton University	<b>B-</b>
University of Northern British Columbia	<b>C+</b>

**THE PERSONALITY TEST**

This year's Canadian University Report survey added some new questions designed to discover what undergrads thought about various aspects of their institution's "personality." Are the schools undergrad-focused or research-inclined? How diverse are they? Do teachers nurture students or just let them get on with it? Here are the top ten for some of the questions we asked. The complete set of personality test results can be found at [globeandmail.com/education](http://globeandmail.com/education)

**Academically, is your university nurturing and supportive?**

- 1 Redeemer University College
- 2 Trinity Western University
- 3 The King's Univ. College (Edmonton)
- 4 Acadia University
- 5 Concordia University College of Alberta
- 6 University of Western Ontario - Brescia
- 7 University of Western Ontario - Huron
- 8 Mount Royal University
- 9 Grant MacEwan University
- 10 St. Francis Xavier University

**Is your university's curriculum more theoretical than applied/practical?**

- 1 University of Toronto - St. George
- 2 University of Ottawa
- 3 University of Toronto - Mississauga
- 4 University of Toronto - Scarborough
- 5 York University
- 6 University of Western Ontario - King's
- 7 St. Thomas University
- 8 McGill University
- 9 University of Western Ontario - Huron
- 10 Carleton University

**Does your university have a diverse student body?**

- 1 Concordia University
- 2 Carleton University
- 3 Ryerson University
- 4 University of Windsor
- 5 University of Winnipeg
- 6 Saint Mary's University
- 7 University of the Fraser Valley
- 8 York University
- 9 Thompson Rivers University
- 10 McGill University

**Academically, does your university expect you to be self-sufficient?**

- 1 McGill University
- 2 University of Toronto - St. George
- 3 University of Toronto - Mississauga
- 4 University of Calgary
- 5 University of Alberta
- 6 University of Ottawa
- 7 University of Toronto - Scarborough
- 8 York University
- 9 University of Waterloo
- 10 University of Manitoba

**Is your university's curriculum more applied/practical than theoretical?**

- 1 Mount Royal University
- 2 Université de Sherbrooke
- 3 Ryerson University
- 4 OCAD University
- 5 Kwantlen Polytechnic University
- 6 Trinity Western University
- 7 Vancouver Island University
- 8 University of the Fraser Valley
- 9 Grant MacEwan University
- 10 Concordia University College of Alberta

**Does your university have a homogenous student body?**

- 1 Redeemer University College
- 2 Nipissing University
- 3 Queen's University
- 4 University of Guelph
- 5 The King's Univ. College (Edmonton)
- 6 Wilfrid Laurier University
- 7 Lakehead University
- 8 St. Francis Xavier University
- 9 University of Lethbridge
- 10 University of Western Ontario - Huron



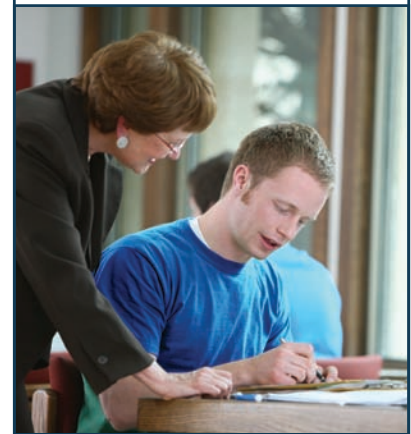
**Q:**  
What do you have to do to get noticed by the pros around here?

**A:** Become their student.

**Yes. It's that simple.**

Because this is Mount Royal: the undergraduate university where classes are smaller, faculty prefer to know who they're teaching and learning is an inspiring journey.

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[mtroyal.ca](http://mtroyal.ca)

## BRIANNA LOWE

*Fifth-year student, Drawing and Painting (with a minor in Printmaking), OCAD University, Toronto*

Photographed by **Elise Windsor** on campus, September 29, 2011

### What will you do after you graduate?

I will most likely continue my catering jobs to pay my rent, but will pursue my artistic endeavours through self-promotion and group shows. Like any career in the arts, it's all about making connections and hustling. I would love to jump into a gallery job or an artist co-op, but those are hard to come by. Like most art-related jobs, they offer more in experience than money.

### Does the current job market worry you? Will your university experience and degree help you land a job that you want?

It does worry me, but it won't make me stop pursuing what I want to do with my life. My university experience has helped me, more so in that it has helped create a supportive base with professors and students/friends to help pursue making art.

### What do you think you've learned from your university experience? Overall, was it worth it?

I've learned something new each year I attended university, as well as how to survive in today's art market, which is invaluable. Yes, at this point I don't regret anything, though I haven't had to pay back my student debt yet.

### What advice would you give somebody about to start university?

Take your time. There is no rush and education isn't a race. If you want to get the most out of your education, take it at your own pace and give it your all.



At the University of Guelph....

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