



# MACLEAN'S

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**To attract top students, many big universities are thinking small**

KIMBERLEY NOBLE | Jun 26, 2006

A few years back, when he was in Grade 12, Steffen Marcus announced that he planned to quit school and become an actor. Fortunately, he now says, the gifted student from Kitchener-Waterloo, Ont., was talked out of this particular career move by teachers who thought he might benefit from a few more years in school. So Marcus applied to the University of Waterloo and the University of Toronto for physics, but decided, in the end, to enroll in McMaster University's integrated Arts and Science Program because it would keep his options open. "I was really scared about entering an undergrad program," Marcus now says. "I wasn't sure of my direction. I didn't want to get locked into an academic stream too early, but I also didn't want a degree that wouldn't work to my benefit."

Arts and science, which admits only 60 students a year, offered him academic adventure, while providing a carefully structured safety net: "It wasn't clear to me that the Artsci degree would be useful," he says, "but I also enjoyed school, so I figured I'd stay until they kicked me out." Not only did that not happen, but Marcus is now heralded as a quintessential Artsci success story; he did the rigorous, integrated course of study in first year, and added physics electives in second year. Artsci's interdisciplinary mix also allowed Marcus to discover what he calls "a small talent for pure math" -- and, earlier this year, he was offered a fellowship to pursue a Ph.D. in pure mathematics in the Ivy League, at Brown University. And he did it all while indulging in his love of theatre, directing McMaster's 2006 production of the musical *Pippin*.

Marcus's story is not so unusual. A growing number of brilliant and talented Canadian students, who have their pick of schools, are rejecting conventional undergraduate experiences in favour of elite, small-group programs that offer them greater intellectual challenges and broad, interdisciplinary studies. Sometimes described as "universities within universities," they range from exclusive first-year programs to three and four-year degree programs with limited enrolment. And while this option remains the undergraduate road "less travelled by," to quote Robert Frost, it's a route that universities are increasingly exploring -- especially big and often impersonal research-driven institutions that need to increase student satisfaction and engagement.

The goal is to give some of the most sought-after students the intimate experience they might expect at a smaller, primarily undergraduate university or U.S. liberal arts college. Says Chris Waltham, director of the University of British Columbia's Science One program, possibly the most exclusive program of this kind: "Although we like to use the word innovative, we're trying to regain what has been lost on the move toward mass education."

What distinguishes these programs from regular undergraduate offerings? All are small, with cohorts that range from 40 to at most 275 students, broken down into groups of 15 to 25 for lectures, labs,

seminars and discussions. For the most part, the courses are exclusive; they are not available to other undergraduates. Also, these programs are intensely interdisciplinary, synthesizing material from different academic departments. Finally, each program's cohorts are intended to remain cohesive: many schools encourage these close-knit groups to stick together, and to maintain their relationships with first-year faculty, until they graduate.

UBC's Arts One, an intense first-year integrated arts program offered since 1967, is the oldest such program in Canada. The best known is undoubtedly the Foundation Year Programme at the University of King's College in Halifax, created a few years later. Next came Concordia University's Liberal Arts College, and then its Science College, small stand-alone academic units. McMaster's Artsci was launched in 1981 and nine years later the University of Guelph started a first-year integrated arts and science option, called Akademia, which has been recently expanded into a four-year integrated degree.

The '90s saw the start of UBC's Science One, Dalhousie University's Integrated Science Program and McMaster's bachelor of health sciences. McGill University has added a first-year "foundation" program called Arts Legacy as well as a bachelor of arts and science degree, and both Victoria and Trinity colleges at the University of Toronto have designed special first-year programs available to all undergraduates but firmly rooted in the strengths and traditions of each college. The University of Alberta has an initiative called Science 100 in the works, with a scheduled launch date of 2008.

The success of UBC's Arts One notwithstanding, it's unlikely that any of the other programs would exist if not for the Foundation Year at King's. In 1972, a group of professors won approval for a "Great Books"-style curriculum, modelled in part on undergraduate courses at Oxford and Cambridge. Students spend a year immersing themselves in Western civilization's great literary accomplishments and philosophical questions, to what Foundation Year professors maintain is their lifelong benefit. "It's easy to learn skills," says Gordon McOuat, a professor of humanities and social science who lectures in King's Foundation Year program, and has been involved in the development of two of the upper-year programs that draw from the experience of Foundation Year. "What is harder is to learn how to read, how to distill, how to recognize, synthesize, integrate, and generate original ideas."

What's also hard is getting into one of these elite programs. They are all -- no surprise -- highly selective. Most require a minimum high school average in the high 80s, and the grades of successful candidates are usually over 90 per cent. To win one of 72 places in Science One, applicants must first be admitted to UBC's science department, which has among the most stringent admission requirements in Canada, and then persuade the admissions committee that they are genuinely interested in integrating social exploration and writing skills with their scientific disciplines. For nearly 700 applicants, Artsci has just 60 spots. McGill administrators were shocked by the response to the new bachelor of arts and science degree. "This was not meant to be an elite program," says Morton Mendelson, associate provost of academic programs and services. Nevertheless, it is: McGill was swamped with thousands of applications when B.A. & Sc. was launched last year. Just 188 students got in.

For the fortunate few, these programs are an enormous bargain: there are generally no additional fees; students pay the equivalent of what any conventional arts or science degree student would be charged, yet get access to a substantially higher share of university resources.

At Victoria College, for example, the new Vic One program has lured some legendary professors out of retirement -- teachers who, before retirement, were available to only a handful of graduate students -- to create new courses. Trinity One offers first-year students the opportunity to be in a

class of 25 taught by two stars from the far reaches of U of T's teaching galaxy: historian Margaret MacMillan and philosopher Mark Kingwell. Many programs also offer students a variety of perks: dedicated academic advisers, special accommodation in residence, as well as extracurricular enrichment in the form of field trips, social events, and famous speakers. In the first-year programs at U of T, these have included filmmaker Norman Jewison, former Supreme Court justice Frank Iacobucci, and former governor general Adrienne Clarkson.

And in exchange? Students must get with the program. Most of these innovative small- group programs lock students into a very specific curriculum, with either no electives or far fewer than would be available to conventional undergraduates. The offerings at Dalhousie and King's, for example, are each, at their core, one big first-year interdisciplinary course, in which the whole cohort is assigned the same work, and each student emerges at the end of first year with a single mark.

At McMaster, Artsci students all take the same curriculum in first year: Western civilization, writing and logic, an inquiry-based course in international development, and a unique Artsci calculus course. The only course outside the program -- also mandatory -- is biology. There are no electives until second year, and even then, three of five courses -- Western civilization, physics and statistics -- are special classes, taught only to the Artsci cohort. In third and fourth years, the group remains together but the curriculum opens up to include increasing amounts of individual inquiry-based study and research.

One drawback of a small-group program: a crushing workload. At some, students can lose marks if they're not prepared to talk in every class. They must all be able to produce enormous quantities of researched and written material. "This is not a soft option," UBC's Waltham says of his science program. The survivors agree that it isn't for everyone. "This is a great program with brilliant teachers but it was really hard," says Kaitlyn Lee who just completed first year at Dalhousie. "They gave us so much work, it was really all we could do. It was not the first-year experience I wanted. I wanted to have the time to make some new friends outside of my program." Yet, the student says, "given the option, I would probably do it again."

The reward? Because of their rigour and their breadth, these elite programs carry a definite cachet with selection committees at graduate and professional schools. "It is no secret that med schools and law schools tend to like the Artsci degree," says Marcus. Yet he believes that it's also entirely possible to complete this kind of degree and be extremely well-educated, and still have no firm sense of direction. And that may not be such a bad thing. "I am certain there are a few of us who finish fourth year and when their relatives ask 'Now what?' they answer: 'I really have no idea,'" he says. But then, if there's one thing the integrated approach teaches, it's how to measure success in one's own terms. "It seems to me that these people might actually end up leading the most interesting lives of us all."

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