



THE SCI 07 CHRONICLE

July 2010 – Vol IV

The "look how smart we're getting" issue!

Sci 07 Gets Extra Degrees!

Many of us have realized that engineering is simply not what we want to do in life. A lot of people are talking about taking another degree to help bridge the way into something new. Here's some feedback from classmates who are doing exactly that.

CFA - Chartered Financial Analyst

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The CFA program is a graduate level, self-study program covering topics in economics, financial statement analysis (accounting), debt/equity securities, derivatives/alternative investments, corporate finance, portfolio management and quantitative methods. The program consists of three tests, held once per year at most major cities across the world. It is hard to quickly sum up the contents of the curriculum, although anecdotally CFA Level I has been compared to an undergraduate finance program. Full details can be found at the CFA Institute website (www.cfainstitute.org).



The main reason I started this program was because I was interested in finance and business in general. I narrowed it down to the CFA program or an MBA. The CFA program is entirely self-study, and can be completed while you work full time as an engineer, whereas the MBA programs I had been looking at would require me to quit my job. In addition, the cost of entering the CFA program is an order of magnitude less than an MBA program. Given that I was still interested in pursuing an engineering career, it seemed to be the right move.

I don't really expect to do anything with it at the moment to be honest. I am still very interested in pursuing a career in engineering, and enjoy my current job. However, you never know what the future holds, so I may end up seeing a measurable benefit from it some day. Most CFA candidates are in the program to jump start a career in equity research, private equity, hedge funds or with large investment management companies.

Comparing Engineering to the CFA apples-to-apples is hard, but in general my opinion would be that engineering was harder. If you look at any one topic or equation in the CFA program, engineering at Queen's would have been steps beyond on the difficulty scale. The issues with the CFA program are twofold, the first being that you do not get any equation sheets or backup materials on the day of the exam - you essentially have to fully memorize/understand every topic in the thousands of pages of material they send you when you sign up for the course. The CFA institute is famous for testing small details found on only one particular page of the curriculum. The second issue with the program is the time commitment required. The CFAI recommends somewhere around 300-350 hours of study per level, which is a lot of evenings and weekends spent reading if you work a full time job.

Medicine

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After spending four summers working at Vale (formerly Inco Ltd.), I decided that I wanted to venture down a different career path from chemical engineering. I'd always been interested in medicine; however, as few of you would know, I could not stomach blood. With that in mind, I applied for a Masters in Clinical Engineering at the University of Toronto and spent two years working on new medical devices, transitional care models between hospitals, and countless other engineering applications to the world of medicine. I thought that this would be enough to bridge my interests in medicine with what I loved about engineering. It wasn't - but it was a step in the right direction.



Luckily, the Northern Ontario School of Medicine (NOSM) also believed that I was a fit for their medical school. Moving back to Northern Ontario has been an amazing experience. The school is going into its sixth year of admissions and has had remarkable success with its first graduates in residency placements. With only 32 students in my class, I've been lucky to have had a number of hands-on experiences such as giving injections (the first one to a fellow Sci '07), suturing, and even assisting in some surgeries. NOSM has also hosted a number of workshops focused on casting, injections, IVs, and basic surgical skills. I've had placements with family doctors, athletic therapists, the hospital's rehab unit, cardiologists, and some various community-centered programs. Unique to NOSM, I also had the opportunity to complete a four-week Aboriginal placement near Sault Ste. Marie. I birthed my own moose-hide drum, made a deer-skin rattle, and spent hours in their Wellness Centre learning about diabetes, alcoholism, drug abuse, and the issues surrounding HST taxation.

Transitioning from engineering to medicine has been a good challenge. I now have much less class, easier problems to solve, and much more to memorize. I am already looking forward to my second year at NOSM.

I am in the process of obtaining my MBA at Richard Ivey (University of Western Ontario). The good news for engineers that are applying for an MBA is that we are in high demand. Approximately one third of my class come from an engineering background, with Queen's engineers being more prevalent than any other engineering school (we currently have representation from Sci 01 to Sci 07). MBA schools are recognizing that recruiters in both banking and consulting see value in analytical capabilities, while engineers, at a minimum, have their entire undergraduate degree for experience in this field.



I chose to do my MBA because I wanted to transition out of my current position into a different field entirely, which is quite common. Approximately 33% of my class is attempting to enter into management consulting, while another 33% are attempting to enter into finance. Of that 66%, most were not in that field before their MBA. The remaining students are a mixture of entrepreneurship, real estate, technology and healthcare. The professional advantage of an MBA is that you are provided with networking opportunities with firms that you might be interested in, and you become a part of an active alumni network that are very interested in guiding you towards success.

To condense all of the material into a short time, the year is broken into modules. The first module, which I have just completed, is focused on core concepts in business, including analytics, marketing, accounting, finance, leadership, and operations. The second module has more specific topics, such as strategy and information technology. After the second module, there is more of an emphasis on electives, including a period where students can go to China or India to learn about business in an emerging economy. Another elective provides students with an opportunity to meet Warren Buffett. Some topics are more general – leadership comes to mind, but analytics and operations are courses that engineers tend to excel in above the average student.

In terms of difficulty, the MBA material is arguably easier than engineering. However, the amount of work required in an MBA is significantly greater. That said, the material is more applicable, the professors really do care, and the same work-hard/party-hard mentality applies. I actually cannot say enough about the professors, they are so impressive that standing ovations were not uncommon. They have brought in executives from West Jet, and Google, while characteristically missing events such as a 30 year anniversary to help students in trouble.

Despite the volume of work, the connection you make with your classmates is almost identical to Queen's, whether through intramurals, extracurricular activities or frequent bar appearances. I have thoroughly enjoyed my time so far and would recommend an MBA to anyone that was considering a career change, entrepreneurship or as a method of career advancement.

Law

The response I get when I tell people that I'm doing a law degree is "Oh! Are you going to be a patent lawyer?" Despite the combination of engineering and law being an ideal combo for patent law, that's not why I'm at the U of T. It'd be easy to say that I chose law because it opens a lot of doors (it does), or that it's because there's great synergy between law and engineering (there is), or even that lawyers get paid better (they do), but none of those are why I went into law school. In my experience, engineering is a solitary practice and it just didn't do it for me. I needed to interact with people. I wanted a career that felt like I was making other peoples' lives better.



Obviously, you don't come to this kind of realization overnight, and I'd be remiss if I didn't recognize that the frequent talks I had with my step-mom, a lawyer, had a great deal to do with my choice, but in the end I had a pretty clear picture of what I wanted to achieve. I wanted to combine something I thought I could be good at, law, with an industry I was passionate about, the arts, in a way that helped people. So, like Dorothy towards OZ, I began my journey towards being an entertainment lawyer.

I'd say most people going into law school don't have as clear a picture of what they want to do. So it's nice that the entire first year at UofT is common, everyone takes the same seven courses: Administrative Law, Criminal Law, Torts, Contract Law, Property Law, Constitutional Law, and a course on ethics and professionalism... and since law school is a three-year program, there's plenty of time to specialize in upper years.

So far, the biggest challenge I've faced has been transitioning from thinking about answers like an engineer to thinking about questions like a lawyer. In law there aren't any right answers, there are only opinions, backed up by arguments, based on themes that come from a wide variety of sources. While this may seem painfully obvious, learning to think about problems in a more multifaceted way and recognizing the variety of nuances within an issue has been one of the biggest obstacles I'm still overcoming.

The other major challenge that law school brings is the workload. Engineering might have had more class hours but overall it pails in comparison to law school. Part of this is because of the volume of reading assigned, which can exceed a hundred pages a day, but mostly it's because of your peers. Imagine if each of your classes in undergrad were whittled down to just the top ten students. Suddenly, by the magic the bell curve, you're no longer at the front of the pack, instead you're riding the hump of the wave right to the beach of mediocrity and you have to do a lot more to stand out. That being said, I have no regrets with going to law school and I'd be happy to answer any questions about the process or my experiences thus far.

SCI 07 HONOUR ROLL – Look Who Got Their Masters! (or are close enough it practically counts)

Person	Degree	School	Details
Marinha Capela	M.Sc.	U of T	
Alex Caspary	M.Eng.	U of T	
Jeff Oram	M.Eng.	UBC	Clean Energy Engineering
Steve Andrews	M.A.Sc	RMC	Measurement and Computation of Losses from a Transonic Turbine Vane Cascade
Alan Fidler	M.B.A.	Queen's	
Aaron McGregor	M.A.Sc	Queen's	A Method to Improve Cartilage Integration
Geoff Greer	M.A.Sc	Queen's	Chemical Engineering
Mike Swarz	M.A.Sc	Queen's	Mechanical Engineering – Thermal Fluids
Jill Fairley	M.A.Sc	U of T	The effect of treadmill walking on the stride interval dynamics of children
Andrew Duncan	M.A.Sc	Queen's	Wood Pellets for Fuel
Cliff Howard	M.A.Sc	Queen's	Hybrid Turboexpander and Fuel Cell system for power recovery at natural gas pressure reduction stations
Christina Vanderwel	M.A.Sc	U of O	Experimental Fluid Dynamics and Turbulence
Andrew Engbretson	M.A.Sc	Queen's	Development and validation of a protocol to determine the elastic modulus of cancellous bone tissue"
Paula Mosbrucker	M.A.Sc	Queen's	Nuclear Materials – Texture Evolution and Variant Selection in Zirconium Alloys
Brad Fowler	M.Sc.	L.S.E.	Management
Paige Snelling	M.Sc.	Queen's	Stress and Geologic Structure on Mining-induced seismicity
Liz Cszaszar	PhD (in Works)	U of T	Controlled Expansion of Hematopoietic stem cells from umbilical cord blood.
David Potter	J.D. Law	Queen's	Intellectual Property Law
Colleen Decker	M.A.Sc	U of A	Biomedical Engineering
Melanie Thompson	M.Sc.	Queen's	Mechanical Analysis of Osseointegrated Transfemoral Implant Systems
Jamie McCann	M.Eng.	U of T	Civil Engineering
Anna Kazmierska	M.Eng.	U of T	Civil Engineering
Mike Taylor	M.Eng.	Queen's	Gear Fault Detection using non-contact magnetic rotational position sensors
Brendan Smithyman	PhD (in Works)	UBC	Geological Engineering
Megan Smithyman	M.Sc.	UBC	Geological Engineering
Meaghan O'Reilly	M.Sc.	Oxford	Biomechanics of Flatfoot in Children
Michelle Romanow	M.B.A.	Queen's	
Lindsay Osborne	M.A.Sc	Carleton	Fire Safety Engineering
Ryan Zizzo	M.A.Sc	U of T	Designing an Optimal Urban Community Mix for an Aquifer Thermal Energy Storage System
Sarah Kimball	M.Eng	UBC	Geothermal Energy
Michael Faba	M.A.Sc	Queen's	Latent Amine Cures of Poly(isobutylene-co-isoprene)
Helen Dry	M.Sc.	U of C	Culture Protocols for the production of synovium-derived precursor cells
Ashley Walker	M.Sc	Surrey	

Paula Mosbrucker gets the Tricolour Award

Paula Mosbrucker was one of the proud recipients of the Tricolour award this year. The Tricolour award is the highest honour Queen's can bestow upon graduating students. Paula was awarded the award for working "in the area of academic representation in terms of curriculum development, tuition policy and the greater University vision with the Engineering Society and in conjunction with the AMS in a number of roles". Those of us that know Paula can vouch for her tireless efforts towards improving engineering education during her tenure at Queen's. Paula was surprised to hear she was receiving the award, they caught her watching the Oscars with her housemates. "It was the first time in my life I've actually eclipsed James Cameron".

Paula joins Michelle Romanow, Tea Room founder, who won the award in 2007, to become the 2nd Sci 07 to get this prestigious award. We are counting this as a win for Sci 07, besides the fact the Journal cited Paula as being an Master of Art's 10 (Apparently Nuclear Materials isn't a Science...©).



Queen's Update

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Hey Sci '07 -- here's a nutshell update of Queen's 2009-2010.

The Queen's Centre Grand Opening Celebration took place Friday January 15th 2010. It includes a "Fireside Lounge", new Common Ground (twice the size), food court, retail space, and expanded student club space... and the new athletics centre, of course. The QP, P&CC, and Alfie's remain in the JDUC. The next phase of the Queen's Centre is "TBA", and will include a new track and arena.

Queen's Football team took home the Vanier Cup this year in the biggest second-half comeback in Vanier History defeating the Calgary Dino's. Queen's was the heavy underdogs going into the game and were behind 18 points at the half. Queen's rallied in the second half to win 33-31 in a very intense game.

"Alumni Weekend" took place on May 28 - 30, 2010. The next Spring Reunion dates have been set May 27 - 29. There is still lots of buzz about the traditional Homecoming weekend ("fauxcoming") but no signs of it returning, as we knew it, anytime soon.

EngSoc Services have been running per usual. Golden Words will be having its 45th anniversary this coming year, and the Tea Room will be 5! Clark Hall Pub will be over the hill (40 years) in 2011-12 (PS -- apparently they're considering a shiny new elevator... must be the pub version of a mid-life crisis).

Alumni Events are happening in major cities all over the world -- check the calendar to see if your current city has one soon at <https://advevents.queensu.ca/>. Remember to keep your contact info up to date at The Common Room queensu.ca/alumni.

Fun Fact -- in 1962 the EngSoc had a GLEE CLUB.



Queen's wins Vanier Cup



New Look of Clark Hall Pub

Sci 07 & Homecoming

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The stance of Sci 07 on Homecoming remains that our reunion will take place in the fall. If Queen's has not re-instated homecoming by 2012 then we will be selecting an arbitrary weekend in October to have our reunion. Interacting with current students is a crucial part of the experience in returning to Queen's so we will not be having our Reunion in May.

Sci 07 Bank Account

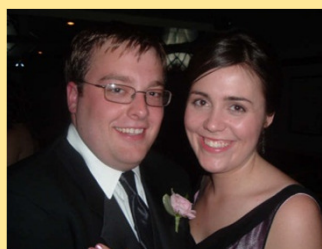
Chris Johnson chrisjohnson.07@gmail.com

Balance - July 31, 2009	\$797.09
Bank Charges for 12 Months	\$- 23.40
Balance - July 31, 2010	\$773.69

*The account is in a basic community plan with TD - bank charges are \$1.95 monthly



NUPTIALS



Jamie Cranford & Megan McMurray are getting hitched.



Brandon Parsons is getting married to **Kat Walker**.

If you have an announcement for the annual SCI 07 CHRONICLE or want to comment, please e-mail queens.sci.07@gmail.com