

 **Commentary**

Should you do an undergraduate internship?

BY DENNIS HE

Taking a year away from university studies is a big decision. Some see it as a refreshing reprieve from academia and an excellent opportunity to gain experience. Others argue it is an unnecessary delay from school and graduation. My sentiments once fell into the latter category, but recent experiences have made me a strong proponent of organized, well-planned breaks from traditional university education.

After completing three years of undergraduate studies in Biology at Western, I left the classroom for 16 months to work as a microbiology research assistant at Environment Canada in Burlington, Ont. I acquired this position through Western's Science Internship Program, which allows Science students to work full-time in paid, career-related placements at a senior point in their academic studies. After interning for 8-16 months, students return to complete the final year of their undergraduate degree.

I was initially apprehensive about enrolling in the internship program and extending my undergraduate degree. My coursework was going well; I had a strong social network at Western. Moreover, leaving school for a year meant I would graduate one year later than my friends. But after careful



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thought, I decided real-world experience within my chosen discipline (microbiology) was more important than missing out on a few graduation parties. Plus, the salary I would receive could offset some of my student loans.

With a touch ofrepidation, I signed up and hoped for the best.

I was surprised to discover the quantity of potential internship placements available. The list included small private start-ups, various governmental organizations and large multinational companies. I was encouraged to reach out to any of the candidate placements that piqued my interest.

The application process was straightforward but by no means was a job handed to me. As part of the program, I attended workshops and seminars about how to prepare a strong



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application, approach companies and deliver a successful interview.

I quickly learned applying for jobs is as challenging as writing exams. I spent hours editing cover letters, reworking my resume and applying and reapplying for openings. Eventually, I received some interview invitations, meaning I had to quickly borrow a pair of dress shoes, iron my suit and rehearse interview questions.

The hard work and training paid off because job offers started rolling in.

Soon, I was swapping my sweatpants for slacks, backpack for a briefcase and textbooks for laboratory notebooks as I made my way to Burlington for a placement at the Canada Centre for Inland Waters, which houses more than 600 staff from Environment Canada.

My work centered on microbial source tracking in the Great Lakes watersheds – identifying fecal pollution and implementing remediation steps. For example, alongside other scientists, I looked at the amount of *E. coli* as well as the different types of DNA within water samples for clues about sources of fecal contamination.

Similarly, we also examined how temperature influences the growth of *E. coli* in snow and ice. The ultimate goal of this work is to positively influence watershed policy around the Great Lakes.

From the first day on the job, I was amazed to be contributing to such an important project.

During sampling season, I spent time in the field and in the lab. I also got to visit a diversity of places and learn a wide range of new skills. Some days I drove to the Humber River in Toronto or waded into Lake Ontario. Other days, I was analyzing DNA or observing *E. coli* on Petri plates.

My lab courses at Western gave me a good base to build upon, but I soon learned there is a big difference between a predetermined coursework experiment and an unpredictable research protocol.

Although I encountered many challenges, there was always someone close by to lend a helping hand, including senior scientists, post-docs and even other interns. The weekly lab meeting allowed me to build strong professional relationships and also exposed me to the other

research projects going on in the lab. The most stressful part of the job was when I started to work independently – I still recall that sinking feeling when I looked over my shoulder and saw there was nobody there.

I persevered and, over time, I grew into a self-sufficient scientist, which likely would not have happened had I not pursued the internship.

At the beginning of this journey, I would not have thought it possible to learn as much as I did in a single year. For anyone considering a career in science, I would definitely recommend taking time away from the classroom to gain some hands-on experience. I will miss all of the great people I met at Environment Canada, but I'm looking forward to finishing my degree at Western and applying my newly gained skills to the next phase of my career. **WH**

Dennis He is a fourth-year undergraduate Science student at Western. This essay is the product of a science-writing internship in David Smith's Lab at Western.

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