Rewarding a Stellar Achiever

Over the past 26 years, we have had a large number of students pass through our doors who have gone on to achieve great things. All of our students are capable of reaching high levels of success, but sometimes we come across a student whose excellence stands out above the crowd. As we watch this student develop, we are confident that he/she is really going to do something special. To recognize this outstanding achievement, this year is the beginning of an annual tradition in which we will present one exceptional co-op student with the UBC Science Co-op Student of the Year Award and a cheque for $500.

For a first time award, we were pleased to see such a large number of strong applicants apply. After much deliberation, we would like to announce that 4th year Honours Pharmacology student, Shane Lloyd is this year’s 2007 UBC Science Co-op Student of the Year. Shane was an incredible candidate, possessing a long list of achievements that are truly outstanding. Just some of the highlights include:

**Winner of the 2004 NASA Spaceflight and Life Sciences Training Program Scholarship**
Receiving this award allowed Shane to attend an intensive summer internship program at the Kennedy Space Centre in Florida. Shane worked with senior NASA scientists and engineers on actual flight experiments destined for the space shuttle and international space station.

**Becoming first author in two publications and co-authoring a chapter in a book**
Shane’s first Co-op placement was at the Osteoporosis Biomechanics Laboratory with Dr. Ted Bateman at Clemson University in South Carolina. This NASA-funded lab required Shane to explore the adverse effects of zero gravity on the skeletal system of astronauts. Shane’s successful research resulted in the publishing of a manuscript as first author that has been submitted to the Journal of Applied Physiology. He is currently in the middle of writing a second paper that will be submitted in the spring of 2007. In addition to this, he has been co-author in two other publications. “Shane being first author on two publications and co-author on a book chapter is an accomplishment that I cannot over-state the importance of. This would be a great conclusion for any graduate student after 3+ years of work, but for him to achieve this after only eight months in my lab is truly remarkable.” says Dr. Bateman.

**Top notch research in Germany**
Shane’s sense of initiative and adventure led him to his third co-op placement with Dr. Michael Wolzt at the Medical University of Vienna in Austria. Not knowing a single word of German, nor having any experience using biochemistry techniques, Shane took on a project exploring the effects of a novel protein drug associated with diabetes on fat and muscle cells. While that thought might intimidate some, Shane believes that “[Co-op] is the chance to explore the world and your own potential. To push your limits and see what you can achieve.” And we have no doubt about his potential for achievement. Shane’s supervisor, Dr. Haider, informed us, “I often joke with [Shane] that someday after his publication in the prestigious journal Nature that I will seek out a position in his lab. Yet, I do not joke when I say to you that [Shane] will be a premier medical scientist.”

**What’s next Shane?**
“The demand right now is for scientists who can bring their work from ‘bench to bedside’, that is to say, scientists that can bridge the gap between often-abstract findings of the laboratory and the immediate needs of the patient” says Shane, “I have decided that a combined MD-PhD program will allow me to acquire both the practical skills of a clinician and the critical thinking of a scientist which will be useful as I pursue a career in clinical research.”

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Small Programs with a Big Impact

While some of our programs such as Computer Science and Microbiology are well established in the minds and offices of many companies, our smaller programs have much to offer as well. Take a peek at two of our less well known programs and see if these unique programs are a fit for your employment needs.

Biophysics - The Complete Package

If you take a bit of physics theory, add a dash of biological science theory, glaze with co-op experience and bake in a University for five years, you will have made an honouris biophysics co-op undergraduate.

Students in this program train to have a good working knowledge of one subfield in the biological sciences plus gain the basic concepts and quantitative skills of physics. With this knowledge, students can keep available all of the options in either biology or physics, while opening new opportunities in fields that benefit from the combination. For example, pharmaceutical companies have an interest in biophysics students because they can flourish in areas such as radiology, where imaging techniques like MRI, PET, and ultrasound tests are based on physical phenomena.

BC Cancer Research is another great example of where biophysics co-op students like Ben Lee have made a difference. Jennifer Baker, a PhD candidate in Dr. Andrew Minchinton’s laboratory described working with Ben as “a great experience. Ben’s positive attitude and unique skills had given us the confidence to let him pursue an independent research project on top of his lab maintenance role. For us, co-op students like Ben are great because they give us a chance to scout for potential grad students, save money, and with some training, can offer the many skills a full time lab technician offers.”

Interested in learning more? Please contact Dr. Iqbal at 604-822-2465 or at iqbal@phas.ubc.ca.

Land and Food Systems - How does it taste?

A colossal amount of effort goes into ensuring that our daily food and drink is processed, prepared, preserved, distributed, and served to meet our specific needs and wants as consumers. Students in Land and Food Systems are passionate about meeting consumers’ needs and wants.

These students are part of a program that is one of a kind in BC. Students start working in their third year in a variety of roles such as Assistant Quality Assurance Manager, Marketing Analyst and Research Assistant. These students love the challenge of these roles and take pride in having a big impact on the daily food and drink intake of countless people.

FreshXtend Technologies, who is a leading provider of natural life extension technology to the fresh produce and flower industry, has found hiring these students “great for providing an extra hand for when [they] most need it”. Perry Lidster, Group Technology Leader and Roy Robinson, Director and Corporate Secretary of FreshXtend Technologies have found great success with having these students “participate in exploratory studies and early development of novel technologies and contribute to the enhancement of current technologies via project based work.” Of course this is just one of many roles Land and Food Systems Co-op students have excelled within. Interested in learning more? Please contact Ms. Woo at 604-822-9884 or at mwoo@phas.ubc.ca.

These are just two examples of programs UBC Science Co-op has to offer. To get a complete listing of available programs, please visit our website at www.sciencecoop.ubc.ca.
As a current or past co-op student, you probably spent a lot of time trying to balance your social life and scholastics with your job search. It is not easy and if you can find a shortcut, you would probably take it. We cannot directly help you with improving your scholastics or social life, but if you are looking for a job in BC, we have some insights into BC’s fastest growing industries to help you focus your self-directed job search.

To begin, you should know that along with Alberta, BC has one of the fastest growing economies in Canada. Here are some of our top performing industries.

**High Tech Industry**
With over 8,200 high tech companies in BC, employing over 65,000 people, the high tech industry is definitely one of BC’s star industries. Last year alone the entire sector grew by 5.3%. If you are trying to decide what areas in the industry to focus on, take note that firms focusing on areas such as software design, data processing or computer system design are the top growth performers. Nokia, Electronic Arts, PeopleSoft are just a few of the companies that have recently expanded their BC operations and in the past few years, BC has attracted offices from top firms like eBay and Intel.

**Life Sciences Industry**
The life sciences sector in BC has been doing very well over the past few years. BC is now the seventh largest biotechnology centre in North America. In the private sector alone, there are now over 100 biotech companies employing over 2,600 people in BC. BC is home to three of Canada’s largest and most successful biotechnology companies: QLT, Angiotech and Aspreva Pharmaceuticals. BC’s research institutes have also been actively growing with:

- the creation of the new Life Sciences Centre and the Michael Smith Biotechnology Laboratories at UBC, which house over 250 researchers;
- the completion of the largest spinal cord research centre in the world is to be completed at UBC by late 2008;
- the recent creation of the new BC Cancer Research Centre in Vancouver which holds over 600 scientific and medical personnel.

**Natural Resources**
The world has been experiencing a boom in energy and metal prices and BC has been a real winner because of it. Companies in the oil, gas, and metals extraction industries are in desperate need of skilled labour. This industry grew by 8% last year. Growth has also been experienced in non traditional areas such as animal aquaculture and within the higher-value added wood products industry.

**Summing Up**
If you would like to get more information on any of the above industries, please check out the Business section in your local paper, industry magazines, or the websites of local industry associations. There is also a multitude of companies coming to campus to recruit students. Check out career services’ website or the science co-op calendar. Remember to show your target lists to your coordinator before calling or emailing that potential employer. Happy hunting!
The versatility of the Engineering Physics students never fails to impress our employers. Last summer, Dr. Robin Coope, from Canada’s Michael Smith Genome Sciences Centre (GSC), hired Peter Eugster, a 4th year Engineering Physics student. Dr. Coope’s research in the Technology Development Group creates devices and processes for high throughput biology. He specifically hired Peter for the technical skills and knowledge he gained from his academic studies within the Engineering Physics program, as well as Peter’s reputation he had obtained from previous co-op experiences. Dr. Coope says, “He had the complete skills package to make a significant contribution, from fabrication skills, to electronics design to high level physics reasoning — he could do everything needed for this challenging position that I hired him for.”

Peter was the first co-op student hired in the Technology Development Group, less than a year after it began. His main project was challenging; design and build a machine to mix and dispense a heated gel in exact volumes without the presence of bubbles. Peter explains, “The device was not trivial – it had mechanical, electrical, and software components. Fortunately, I had a theoretical background in all three of these areas from my Engineering Physics courses, which was coupled with hands-on experience through my previous work terms and project-based courses. Throughout the entire project I felt very confident in what I was doing, because of this background.”

Dr. Coope speaks about the range of skills and learning tools that Eng Phys students have: “The worry is that Mechanical Engineering students may not have the electrical skills or vice versa, and Physics students might not have enough hands-on skills, so Engineering Physics is a very good source of talent.” The verdict on Peter’s overall performance? “Brilliant,” declares Dr. Coope, “It was, undeniably, one of the most effective work terms ever.” His all-around use of mechanical, electrical, and programming skills gave him the confidence to come into this workplace and immediately make contributions.

Peter comments, “I enjoyed working in an environment like the GSC where I could see the machine that I worked on being put to immediate use. I enjoyed learning what I could about life science and Cancer research.” Dr. Coope emphasizes that having a Co-op student of this caliber was a very cost effective way to add more capable hands at a time when it was very much needed.

Would you like to know more about our Eng Phys Co-ops? Contact Nicole Benda, Co-op Coordinator for Engineering Physics, at 604-822-1384 or epcoop@phas.ubc.ca.

**DID YOU KNOW?**

Engineering Physics co-op students are well known for their problem solving skills and analytical thought processes. Through their academic program, they develop a solid theoretical foundation as well as strong hands-on applied skills through various projects in areas such as Mechanical, Electrical and Computer Engineering - making them excellent candidates for co-op positions!
Meet the Staff

The Science Co-op team has changed over the years and we wanted to reintroduce some old faces and introduce some new ones.

**Dr. Javed Iqbal**
Director and Coordinator for Physical Sciences and Pharmacology
“I enjoy being a lines judge for my kids’ soccer games on the weekends.”

**Nicole Benda**
Coordinator for Engineering Physics
“Skiing is one of my ultimate favorite sports - I've been skiing since I was 2 1/2 years old.”

**Sharon Chan**
Admin. Manager & Development Coordinator
“I am expecting my first baby this Spring! p.s. I will miss all the Eng-Phys students!”

**Milah Woo**
Life Sciences Coordinator
“I am an avid dragonboater and have been paddling for the past 7 years.”

**Lisa Wolfe**
Coordinator for Computer Science
“Training to trek to the Everest Base Camp in March.”

**Audrey Davison**
Office Administrator/Interview Scheduling
"People ask me how I could leave beautiful Barbados to move to Canada, but we are so fortunate to live in beautiful BC!"

**Sue Yang**
Life Sciences Coordinator
"I have traveled to over 8 countries and 15 cities before I graduated from University.”

**Constance Wun**
Coordinator for Computer Science
"Neither of my 3 and 2 year-old boys dropped into the ocean on last year’s cruise.”

**May Van Slyck**
Administrative Assistant
"I lived and worked on a glacier.”

**Allan Dias**
Program and Marketing Assistant for Life Sciences
"Worked and studied throughout Europe for one and a half years.”

**Denise Jesudason**
Program and Marketing Assistant for Computer Science
"I am currently training for my first marathon in May.”

**Aleysha Arndt**
Science Co-op and Engineering Physics Program Assistant
"I have a passion for Old World pre-history and Palaeolithic archeology.”
Our New President, Professor Steven Toope

A scholar holding degrees from Harvard, McGill, and Cambridge, specializing in human rights, public international law and international relations, Professor Steven Toope is UBC’s 12th President and Vice Chancellor. He has succeeded Dr. Martha Piper who completed her nine years of service to the University in June 2006.

Professor Toope is a former dean of the Faculty of Law at McGill University, and head of the non-partisan educational foundation honouring the legacy of the late Prime Minister of Canada, Pierre Elliott Trudeau. Professor Toope also took up a tenure as a Law professor when he joined UBC on July 1, 2006. “I look forward to continuing Dr. Piper’s outstanding work in positioning UBC as one of the world’s top 40 research universities and its students as citizens with a global perspective.” said Professor Toope.

A Nobel Laureate Educator at UBC

Dr. Carl Wieman comes to UBC from the University of Colorado at Boulder, where he has won awards as Distinguished Professor and Presidential Teaching Scholar. He was also named the United States’ Professor of the Year in 2004. Professor Carl Wieman was awarded the 2001 Nobel Prize in Physics with other colleagues for creating a new form of matter, the Bose-Einstein condensate.

Dr. Wieman will lead a major initiative to further develop the quality of science education at UBC. Initially, five of UBC’s Faculty of Science departments will participate in this project. Select courses will be re-designed and launched in September 2007. “I am joining UBC because I am excited to be a part of this initiative and hope that my expertise can help realize it. Existing initiatives at UBC provide an excellent foundation for further improving how science is taught and perceived by both science and non-science students” says Professor Wieman.

The Faculty of Science Brings in a Taste of Arizona

We would like to offer a warm welcome to Dr. Simon M. Peacock, the new Dean of the Faculty of Science who joined the UBC community in September 2006. Dr. Peacock comes to us with a B.S. and an M.S. degree in Geology from MIT, as well as a Ph.D. in Geology from UCLA. He arrives at UBC after spending 21 years at Arizona State University (ASU). At ASU he started as an Assistant Professor in 1985 and rose to take on prestigious roles such as the Divisional Dean of Natural Sciences and Mathematics (2004-2006), Interim Associate Dean for Academic Personnel in the College of Liberal Arts and Sciences (2003-2004), and Chair of the Department of Geological Sciences (1997-1998; 1999-2003).

At UBC, Dr. Peacock will be focused on advancing the physical, life, and mathematical sciences building interdisciplinary science education and research programs; increasing research competitiveness; and enhancing the diversity of the science faculty.