

STUDENTS' COUNCIL LATE ADDITIONS

Tuesday April 8th, 2014
TELUS 134

LATE ADDITIONS (SC 2013-25)

- 2013-25/1 SPEAKER'S BUSINESS
- 2013-25/2 PRESENTATIONS
- 2013-25/3 EXECUTIVE COMMITTEE REPORT
- 2013-25/4 BOARD AND COMMITTEE REPORTS
- 2013-25/5 QUESTION PERIOD
- 2013-25/6 BOARD AND COMMITTEE BUSINESS
- 2013-25/6c **SPEAKMAN/GREHAN MOVES THAT** Students' Council, on the recommendation of Bylaw Committee, approve Bill #9 in second reading based on the attached changes.
- The Elections Review Committee shall have the power to make, to Students' Union election bylaws, alterations that do not alter the meaning of the bylaws. The Elections Review Committee's mandate shall include making recommendations to Students' Council on Students' Union election bylaws.
- Please see document LA 13-25.01
- 2013-25/6d **BATAL/HANWELL MOVE THAT**, upon the recommendation of the Policy Committee, Students' Council approve the amendments to the Tuition Policy in second reading based on the following principle:
- **The Students' Union shall work towards zero percent tuition increases**
- Please see document LA 13-25.02
- 2013-25/7 GENERAL ORDERS
- 2013-25/8 INFORMATION ITEMS
- 2013-25/8b CAC Summary Report
- Please see document LA 13-25.03

- 2013-25/8c** ERC Summary Report
Please see document LA 13-25.04
- 2013-25/8d** GAC Summary Report
Please see document LA 13-25.05
- 2013-25/8e** Bylaw Committee Summary Report
Please see document LA 13-25.06
- 2013-25/8f** Permanent Residency Brief
Please see document LA 13-25.07
- 2013-25/8g** Block Week Courses
Please see document LA 13-25.08
- 2013-25/8h** Research brief on student entrepreneurship
Please see document LA 13-25.09
- 2013-25/8i** PAW Fee Update by Marc Dumouchel
Please see document LA 13-25.10

- (c) shall oversee the Speaker and the Chief Returning Officer of the Students' Union;
 - (d) shall oversee the progress of Students' Council's legislative agenda;
 - (e) shall recommend to Students' Council a candidate for the position of Chief Returning Officer on or before April 15 of each year;
 - (f) shall review recommendations of the Discipline, Interpretation and Enforcement Board within two meetings of release of the ruling.
- (6) The Elections Review Committee
- ~~(6)~~(a) shall make recommendations to Students' Council on Students' Union bylaws respecting elections, plebiscites and referenda, i.e. Bylaws 2100, 2200, 2300, 2400, 2500;
 - ~~(6)~~(b) has the power to make changes to the bylaws referenced in (a) that don't alter the meaning thereof;
 - ~~(a)~~(c) shall review the *Bylaw Respecting the Elections, Plebiscites and Referenda of the Students' Union*;
 - ~~(a)~~(d) shall solicit feedback from key stakeholders on the Bylaws referenced in ~~(a)~~(a) and the elections process it prescribes;
 - ~~(b)~~(d) shall submit a report to Students' Council detailing their findings and recommendations by the last meeting in November.
- (7) The Grant Allocation Committee
- (a) has authority to set and implement policy regarding the disbursement of the Access Fund;
 - (b) shall provide for the existence of an appeals mechanism for the Access Fund;
 - (c) shall recommend a budget for the Access Fund to Students' Council on or before April 30 of each year;
 - (d) shall approve an administrative budget for the Access Fund, for a fiscal year congruent with that of Students' Union, and provide a report to Students' Council which contains the approved budget no later than March 31 of each year;
 - (e) shall recommend to Students' Council changes to legislation affecting the Access Fund as it considers appropriate or as required by Students' Council;
 - (f) shall make grants and has the authority to set an implement policy regarding the disbursement of funds from the Campus Recreation Enhancement Fund, the Golden Bear and Panda Legacy Fund, the Refugee Student Fund, and the portion of the Students' Union operating budget designated for grants to Student Groups;
 - (g) has authority to grant loans to student groups in amounts not exceeding \$1,500 per student group; and
 - (h) may delegate the granting of funds, with the exception of the Access Fund, where the Grant Allocation Committee has established standing orders identifying the delegate and comprehensive regulations within which the delegate must exercise its discretion when granting.

First Reading Principles

The Students' Union shall work towards zero percent tuition increases

TUITION

WHEREAS the Government of Alberta has shown an increased awareness of the importance of post-secondary education in our province;

WHEREAS the Government of Alberta has the duty to fund the cost of a postsecondary education system that has the capacity for all eligible individuals to participate given the increased importance of an educated populace and the growing demands of an emerging knowledge economy;

WHEREAS the current tuition levels and costs of obtaining a post-secondary education are contrary to the values of a public post-secondary education system;

WHEREAS it is essential that the Government of Alberta craft a policy recognizing the need to alleviate the financial burdens borne by Alberta's students in accessing the post-secondary education system;

BE IT RESOLVED THAT the Students' Union ~~advocates~~ shall advocate for a tuition policy that:

- a. Provides long-term, sustained base operating funding for our universities that will be protected from negative changes in our government's financial situation;
- b. Protects tuition from increasing due to fluctuations in funding grants to the university from the government;
- c. Ensures tuition levels are predictable;
- d. Has as its primary indicator of affordability the ability of students to pay without having to accrue the burden of debt;
- e. Provides for the fact that tuition is only one of the costs of pursuing a post-secondary education; and
- f. Ensures that no student will ever be denied the opportunity to pursue post-secondary education because of their inability to pay;

BE IT FURTHER RESOLVED THAT the Students' Union ~~advocates~~ shall advocate that the Government of Alberta legislate a policy on tuition fees that:

- a. Provides strict guidance to an institution's ability to set tuition, including annual and ultimate limits on the maximum amount of tuition fees that can be levied on students;
Requires post-secondary institutions to provide to the Board of Governors of the institution, the Auditor General of Alberta and the Minister of Innovation and Advanced Education ~~and Education~~ Advanced Education & Technology a detailed and verifiably transparent public plan on how additional tuition revenues will

be spent; and

BE IT FURTHER RESOLVED THAT the Students' Union will not support the University of Alberta Board of Governors ~~of the University of Alberta~~ increasing tuition and will work towards a reduction of any such tuition increases.



COUNCIL ADMINISTRATION COMMITTEE MEETING SUMMARY REPORT TO COUNCIL

Date: April 1st 2014

Time: 5.04 pm

2013 – 2014

Motions

1.	BORDEN/MOHAMED moved to <i>approve the agenda for April 01, 2014 as tabled.</i>	<i>CARRIED 6/0/0</i>
2.	MOHAMED/BANISTER moved to <i>approve the minutes for March 18, 2014 as tabled.</i>	<i>CARRIED 5/0/1</i>
3.	KELLY/MOHAMED moved that <i>Rory Tighe be appointed as the acting speaker for the duration of the council meeting on April 8, 2014, and be compensated accordingly.</i>	<i>CARRIED 5/0/1</i>
4.	MOHAMED/BANISTER moved to <i>have the additional council meeting on April 8, 2014.</i>	<i>CARRIED</i>
5.	BORDEN/MALIK moved to <i>adjourn the meeting.</i>	<i>CARRIED</i>



ELECTIONS REVIEW COMMITTEE MEETING SUMMARY REPORT TO COUNCIL

Motions		
1.	<i>CHELEN/MORRIS</i> moved that <i>the committee should move into closed session. (12.21 pm)</i>	<i>CARRIED</i> 3/1/0
2.	<i>SPEAKMAN/CHELEN</i> moved that <i>the committee should move out of closed session. (12.30 pm)</i>	<i>CARRIED</i> 4/0/0
<i>Date: April 02nd 2014</i> <i>Time: 12.04 pm</i>		2013 – 2014



GRANT ALLOCATION COMMITTEE MEETING SUMMARY REPORT TO COUNCIL

Date: April 03rd 2014

Time: 4.37 pm

2013 – 2014 *MEETING 22*

Motions

1.	LAU/MALIK moved to approve the agenda for <i>April 03, 2014</i> as amended.	<i>CARRIED 4/0/0</i>
2.	LAU/MALIK moved to approve the minutes for <i>March 27, 2014</i> as tabled.	<i>CARRIED 3/0/1</i>
3.	MALIK/LAM moved upon the recommendation of Campus Recreation Enhancement Fund Committee that Grant Allocation Committee approve the 2013/2014 Campus Recreation Enhancement Fund allocation of \$265,179.	<i>CARRIED 4/0/0</i>
4.	LAU/LAM moved upon the recommendation of Campus Recreation Enhancement Fund Committee that Grant Allocation Committee approve the 2014/2015 Campus Recreation Enhancement Fund allocation of \$266,290.	<i>CARRIED 5/0/0</i>
5.	LAU/LAM moved that the Grant Allocation Committee approves the 2014/2015 Golden Bears and Pandas Legacy Fund recommendation of \$168,251.50.	<i>CARRIED 5/0/0</i>
6.	<p>LE/LAU moved to adopt the amended Grant Allocation Committee standing orders.</p> <p><i>The amended GAC standing orders for Section 31) are given below:</i></p> <p><i>“The Golden Bear and Panda Legacy Fund Committee shall recommend funding allocations to Grant Allocation Committee by March 1 of each year for ratification by April 30 of the same year, and disbursal by March 30 of the following calendar year.”</i></p>	<i>CARRIED 5/0/0</i>
7.	MALIK/LAM moved to adjourn the meeting.	<i>CARRIED 4/0/1</i>



BYLAW COMMITTEE MEETING SUMMARY REPORT TO COUNCIL

Date: April 04th 2014

Time: 2.06 pm

2013 – 2014

Motions

1.	<i>SPEAKMAN/GREHAN</i> moved that <i>Students' Council on the recommendation of bylaw committee approve bill number x in second readings.</i>	<i>CARRIED</i> <i>5/0/0</i>
2.	<i>HODGSON/SPEAKMAN</i> moved to <i>adjourn the meeting.</i>	<i>CARRIED</i> <i>5/0/0</i>

Permanent Residency

Prepared for: University of Alberta Students' Council

The following is an update to the POTSU's goals document on international undergraduate students and transitioning to permanent residency.

New Developments:

On February 13th the Federal Government released a new set of regulations regarding International Students in Canada. This was done with the goal of doubling the number of quality international students within 10 years, from 239,000 today.¹ "Quality" may be viewed as a problematic word choice, as often times the students who are recruited are coming from highly privileged backgrounds and recruiting also has been viewed as creating "brain drain" in source countries.² This leads to the question, are governments and universities really looking for "diversity" if they are mainly looking to recruit students who can afford the high costs of international tuition and not subsidizing heavily those who cannot? The Canadian public would have issues with recruiting students who cannot afford international tuition while Canadian students cannot, however, we need to be careful with the language utilized.

Regardless, new rules will make it easier for current international students to accumulate work hours for applying for permanent residency (PR). This mainly stems from students being automatically able to work 20 hours a week off campus during the school year. This will assist undergrads to obtain their work hours for the Canadian Experience Class Stream.³ That said, students do have to go through a dubious process of getting an employer to submit a letter detailing pay, number of hours worked, length of employment, nature of activities, designation, etc., which coming from a part-time employer could be difficult.⁴ This would be easier for graduate students, who are able to utilize their time as an RA or TA to count towards their working hours with "employers" usually more willing to assist in this type of process.

While this is not directly related, as part of the new changes the federal government has also just announced a \$13 million a year scholarship fund for international students.⁵

Updates to Recommendations:

Under the POTSU's goals document it states:

¹ <http://www.international.gc.ca/education/report-rapport/strategy-strategie/index.aspx?view=d>

² <http://www.universityaffairs.ca/speculative-diction/canada-for-sale/>

³ <http://www.cic.gc.ca/english/immigrate/cec/apply-who.asp>

⁴ <http://www.esdc.gc.ca/eng/jobs/lmi/noc/index.shtml>

⁵ <http://www.theglobeandmail.com/news/politics/ottawa-aims-to-boost-international-students-from-six-key-countries/article16344061/>

The Canadian Alliance of Student Associations (CASA) should advocate the federal government to not only increase the number of permanent residents accepted each year in the CEC but to also expand the FSWC program's permanent residency fast-track program to undergraduate international students.

Their needs to be clarification on what exactly a “fast-track” program is. While PHD students have a separate stream they may apply for, they are processed in the same batch as all other FSWC applicants.⁶ They do, however, not fall under the same cap that other FSWC candidates fall under (5000 for all other categories and 1000 for PHD Students or graduates). Essentially, we are looking at two items: quotas and the eligibility for those quotas, the other fast-tracking the processing time (having a PR application processed in 6 months versus a year for example). We would likely have more success either expanding the PHD eligibility criteria or creating a new stream for international undergraduate students who graduated from a Canadian institution. This would just require a simple update to CASA policy:

*CASA recommends that government implement a fast-track to permanent residency to international students from the Master's level (**Or Undergraduate**), or who are working toward acquisition of a skilled trade into the Federal Skilled Worker Program to address Canada's approaching labour and skills shortages.⁷ (Emphasis added).*

The other option that both the UASU and CASA could look to as a potential advocacy point is the expansion of the Provincial Nominee program. Provinces have been given some power to each year nominate a certain set of immigrants to become PR in their province, usually based on what the provinces specific needs are and an agreement that the individual will stay within the province.⁸ Given that each province has their own set of criteria, it may be easier to have them create a specific stream for international undergraduate students, like Alberta has for any student graduates from Albertan post-secondary institutions.⁹ In addition, it is likely that CASA could obtain support from the provinces for the expansion of this program, creating strong allies in lobbying the Federal government (which has generally looked favorably on giving more power here to the provinces).

The research in the POTSU's and CASA's document was extensive and covers the major arguments for this reform.

Appendix A – Petros Kusmu's Presidential Goals Document Excerpt

⁶ <http://www.cic.gc.ca/english/immigrate/skilled/apply-who-instructions.asp?expand=phd#phd>

⁷ http://www.casa-acae.com/wp/wp-content/uploads/2012/12/Permanent-Residency-2012-Final_PDF.pdf

⁸ <http://www.cic.gc.ca/english/immigrate/provincial/apply-who.asp>

⁹ <http://www.albertacanada.com/opportunity/immigrating/ainp.aspx>

From 2002 to 2011, the number of international students transitioning from temporary to permanent resident status increased from 5,807 to 6,731 in 2011 (15.95%)ⁱ. During that period of time, the number of international students in Canada went from 75,216 to 165,372 (120%)ⁱⁱ. (The number of university educated international students went from 39,492 to 73,338 (85%)ⁱⁱⁱ.) Considering that the Canadian Chamber of Commerce (CCC) has recommended increasing the uptake of foreign skilled workers as a means to resolve Canada's skill crisis, it is a shame that undergraduate international students have to go through great lengths to become permanent residents.^{iv} For those students who are not accepted in either one of the three highly competitive immigration programs for international students – i.e. the Federal Skilled Worker Class (FSWC), the Canadian Experience Class (CEC), and a Provincial Nominee Program – they are forced to go through the regular permanent residency immigration process.^v

The regular immigration process for a student graduating from a Canadian university normally involves them returning to their home country to wait at the back of a seven or eight year queue.^{vi} Since most international students' choice to study abroad is a part of a deliberate immigration strategy, thousands of international students who are not admitted to these programs are having their dreams crushed by an unnecessarily stringent immigration system that demands the type of skilled labor these students can offer.^{vii}

Recommendation

The Canadian Alliance of Student Associations (CASA) should advocate the federal government to not only increase the number of permanent residents accepted each year in the CEC but to also expand the FSWC program's permanent residency fast-track program to undergraduate international students.

The Student Union's (SU) federal advocacy organization, CASA, is currently advocating the federal government to increase the number of annual permanent residents accepted to the CEC.^{viii} While much progress has been made in this regard due to the federal government increasing the program's annual residency acceptance from 2,500 (2009) to 10,000 (2013), more work can be done for our international students.^{ix}

For instance, the federal government's FSWC program introduced an international PhD student stream in which PhD graduates can expedite their permanent residence application.^x CASA has seen this as an opportunity to advocate to the government to increase this stream's scope to Master's student. However, this leaves undergraduate international students in the dark and they deserve to be fought for in this regard. Furthermore, the SU and CASA should also look into advocating for aspects of the CEC and FSWP to be tweaked in order to expand the eligibility requirements for permanent residency applications, as recommended by the CCC.^{xi}

Promise

Continue to have CASA advocate the federal government to increase the annual

number of accepted permanent residents in the CEC program and to expand the eligibility of the FSWC program's fast-track stream to undergraduate international students.

ⁱ "Canada Facts and Figures – Immigration Overview: Permanent and Temporary Residents," *Citizenship and Immigration Canada*. 2011. 112.

ⁱⁱ "Postsecondary Student Information System (PSIS)," *Statistics Canada*. Accessed on February 23, 2013. <http://www5.statcan.gc.ca/cansim/pick-choisir?lang=eng&id=4770019&pattern=4770019&searchTypeByValue=1>

ⁱⁱⁱ "Canada Facts and Figures – Immigration Overview: Permanent and Temporary Residents," *Citizenship and Immigration Canada*. 2011. 91.

^{iv} "Canada's Skills Crisis: What We Heard – A Canadian Chamber of Commerce report on cross-country consultations in 2012," *The Canadian Chamber of Commerce*. September 27, 2012. 39.

^v "Applying to Become a Permanent Resident (Landed Immigrant) of Canada," *Student Development Centre – The University of Western Ontario*. Accessed on February 23, 2013. <http://www.sdc.uwo.ca/int/visa/index.html?pr>

^{vi} "News Release – Canadian Experience Class: Creating Jobs across Canada," *Citizenship and Immigration Canada – Government of Canada*. September 14, 2012.

^{vii} "International Students as Canada's New Skilled Migrants," Lowe, Sophia. *World Education Services Canada*. World Education News & Reviews. Volume 23, Issue 10. December 2010.

^{viii} "Leveraging our Strengths: Enhancing Permanent Residency Opportunities to Attract and Retain International Talent," *The Canadian Alliance of Student Associations (CASA)*. November 2012. 3.

^{ix} "News Release – An Immigration Plan that works for Canada: More immigrants who are already working in Canada to be admitted through Canadian Experience Class," *Citizenship and Immigration Canada – Government of Canada*. October 31, 2012.

^x "News Release – Attracting and retaining international PhD students the focus of new initiative," *Citizenship and Immigration Canada – Government of Canada*. November 2, 2011.

^{xi} "2012 Policy Resolutions – Meeting Canada's Labour Needs by Attracting and Retaining International Students," *Canadian Chamber of Commerce*. 7.

Block Week Courses



Created by: Mike McGinn, EPIO

To: Justin Williams (DRPA)

Date: Tuesday April 8th, 2014

What is a Block Week Course?

A block week course is a 3 credit-hour course taken over one week instead of a fall and winter semester schedule (12) or spring and summer (6). A block week course is a type of "intensive course" that can be anywhere between 1-3 weeks.

Examples of Intensive Courses

Colorado College, a liberal arts college, is often quoted as being the pioneer of block programs. They began offering intensive courses in 1970 and they still run the program today.¹ Note that Colorado College *only offers intensive courses*, all of which are three and a half weeks.

In Canada, intensive courses really did not become well known until much more recently with the founding of Canada's first non-for-profit private liberal arts college, Quest University.

Quest:

Quest was founded in 2007 and is unique in many facets. The school boasts eliminating all faculty departments to encourage interdisciplinary, removing all professor titles and rankings and having the system be replaced with equal "mentors", never having a classroom of more than 20 students, and lastly adopting an intensive program.² The university almost exactly copied the system at Colorado College. They only offer block courses, four each semester, for 3 and half weeks.

Quest believes that students benefit immensely from this system. David Helfand, an ex-Astronomy professor at Columbia and now mentor at Quest and President of the

1 <http://www.coloradocollege.edu/basics/blockplan/>

2 <http://www.youtube.com/watch?v=DZQe73IXZtU>

University, argues that students can become fully engaged with the material without worrying about prioritizing other classes. This allows students to have total concentration in and out of class with their studies. It also allows mentors (professors) to experiment with a variety of different teaching techniques and learning opportunities. For example, field-work becomes easy to schedule, group discussions, documentaries, or essentially anything they wish to do (Dr. Helfand in a TEDx talk discussed keeping his students up all night for star gazing.)³ These types of activities would just not be possible in standard class formats.⁴

Despite it's limited time open, there has been much curiosity from across Canada about the success of the such unique circumstances at Quest. Student and mentor feedback has been "overwhelmingly positive" according to a researcher at Mount Allison University.⁵ Those involved expressed "greet freedom within the block period, where faculty and students can engage in a wide range of teaching and learning experiences, yet having the freedom to focus on just one subject area".⁶

Waterloo:

Waterloo University has also implemented some block courses. There is limited research on the reviews of the programs; however, some important items come from the rules that now govern their implementation.

First, they note that "only courses which are pedagogically suitable for teaching in intensive block-format" should be taught.⁷ Also, limits can be set on enrollment. These cases, however, are ultimately approved on a case-by-case basis.⁸ **The school has been contacted for comment, however, no feedback has yet been given.**

University of Calgary:

Calgary, despite having block-course, also has limited discussion of them on their website. This is likely because this University, like other Canadian institutions, have only recently experimented with the idea.

Calgary did complete a series of workshops surrounding block-courses and have completed a list of rules in their academic calendar (see Appendix A), which provides some insight into the institutions current mindset:

3 <http://www.youtube.com/watch?v=DZQe73IXZtU>

4 http://www.questu.ca/academics/the_block_plan.php

5 <http://www.mta.ca/pctc/Quest%20Review%20-%20Curricular%20Innovation%20Report-Fox.pdf>

6 <http://www.mta.ca/pctc/Quest%20Review%20-%20Curricular%20Innovation%20Report-Fox.pdf>

7 <https://uwaterloo.ca/environment/faculty-staff/policies-procedures/block-courses>

8 <https://uwaterloo.ca/environment/faculty-staff/policies-procedures/block-courses>

“...in a recent set of noon- hour workshops held at the Learning Commons, which brought together U of C faculty and staff to discuss the pedagogical and administrative issues surrounding Block Courses. Part of Learning Commons' mandate is to act as a catalyst for teaching and learning-related activities on campus. A series of workshops is being organized on themes identified by faculty members as being of significant interest.

Over two noon-hour sessions, panelists from across campus described ways in which they implemented block courses in their Faculties and Departments. A variety of half-credit and non-credit courses was described. One course was offered around an international dance conference, another, which was held in Chinatown, provided an introduction to the Calgary Chinese community, and another brought in a different expert each day to teach the students about different facets of heritage conservation. Non-credit science and engineering courses provided students with opportunities to obtain general knowledge about their respective fields or specific practical skill sets.

The overall consensus was that the concept of block courses is a good one, and that it should be retained in the U of C calendar.⁹

University of British Columbia:

UBC this year is beginning an experiment with block-courses. Dr. Hanlon, a professor teaching a block-course, expressed concern that students who get sick could easily miss a third of the course and that Dropbox and Skype would be mandatory to make sure students don't fall too far behind. In the university press release one student felt “discipline” was built into the course and would help prevent procrastination. Another student felt that the intensity allows them to remember a lot more after the course has completed than with regular semester courses.¹⁰

Acadia University:

Acadia also is looking into the potential implementation of block-courses.

Dr. George Iwama launched a pilot program in 2005 in Acadia's biology department and is looking at doing a full test of 5 block courses starting in 2013.¹¹ This despite Acadia's Vice-President of Academics Tom Herman stating that despite the positive feedback of the block experiments so far “it posed bigger logistic challenges which proved

9 <http://www.ucalgary.ca/pubs/Newsletters/Currents/Vol6.3/blockwork.html>

10 <http://www.universityaffairs.ca/unbc-pilot-project-experiments-with-block-teaching.aspx>

11 <http://www.theglobeandmail.com/news/national/education/block-plan-education-finds-new-appeal-among-universities/article1357452/>

insurmountable". He further stated "(students with) brief absences due to illness or other commitments can be problematic because of the intensive coverage". 12

Mount Allison:

Mount Allison University has also had some pilot block-courses. The following is an explanation of how one particular course worked and the feedback that was received:

This particular project was initiated in the Spring of 2007 when an intensive, one-week, problem-based research methods course was delivered to third and fourth year Geography and Environment students. In this course (GENV 3701), 13 students engaged in a redesigned research methods course, where a block timetable approach was taken. Students met each day (Monday to Saturday) from 8:30 a.m. – 5:00 p.m., with a final term paper submission date at the end of the traditional Spring Session period.

A joint student-professor evaluation of this problem-based block timetable approach was delivered at the September Teaching Day presentations, with the question: "Is Mount Allison Ready to Break the 12-Week Teaching Term Model?" Student feedback on the nature of this new approach to the curriculum and its method of delivery were universally positive. The same course was delivered for a second time in the Spring 2008 session, with similar results, yet the question remains: are we prepared to address the timing and delivery of our courses and overall curriculum in the "regular term" at Mount Allison?¹³

Pedagogical Traits and Research Regarding Intensive Courses:

Positive Pedagogical Aspects:

The positive feedback that has been given in the short period intensive courses have been popular in Canada by professors and students largely surrounds

1. Being able to focus intensely on a single topic without being worried about various other school commitments
2. Small-class sizes
3. A variety of unique teaching techniques (more group discussion, project-based work, etc)

12 <http://queensjournal.ca/story/2012-01-19/features/canadian-schools-pilot-semester-less-system/>

13 <http://www.mta.ca/pctc/Quest%20Review%20-%20Curricular%20Innovation%20Report-Fox.pdf> pg2

4. Having the flexibility to accommodate professors or teachers from around the world (an Industry-expert or politician brought in to spend an entire day with students for example)
5. The ability to organize trips.

The University of Calgary released the following set of “positive” aspects to block courses after completing the roundtable discussions on them:

- Ability to organize short, intensive courses around a unique event, such as an international conference
- Opportunity for students to become close as a group. This experience often increases class participation
- Short course duration is useful for faculty members with heavy administrative duties
- Short courses with material that cannot be included in regular courses, because of time constraints, provides opportunities for students to raise their skill levels significantly
- High attendance levels
- Students have the opportunity to immerse themselves in a specific topic
- Use of large time blocks to use simulation and other techniques
- Opportunities to bring in experts who can stay for a portion of the week.¹⁴

Academic Research:

There is some academic research supporting these claims.

One paper analyzed an intensive 3-week course in experimental techniques in molecular biology (taught to undergraduate students from varying scientific backgrounds). They found that upon completion of the course 89% of students rated themselves as “comfortable performing molecular biology experiments”, nearly all agreed that they gained skills, 90% agreed the course helped their understanding of DNA and protein, 97% agreed the instructor was effective, and 100% stated the course should be offered again.¹⁵ The trial had some students taking a final exam while others doing a final project. While no students taking the project wished a different method of assessment about 25% of students who took the exam thought another assessment would have been more beneficial.¹⁶ The authors noted it may have been successful because “the best method for learning experimental techniques is a hands-on project with a faculty

14 <http://www.ucalgary.ca/pubs/Newsletters/Currents/Vol6.3/blockwork.html>

15 Nadeau 216

16 Nadeau 217

mentor” and students in the modern classroom rarely have the opportunity to learn like this.¹⁷

Another study analyzing marks showed that students in a 4 week course compared to students in a 12-week course fair equally as well in terms of grade distribution. This analysis was done on students in an introductory accounting course. The researchers also made sure to control for entering GPA in determining that the students fared as well. The most interesting aspect to the study was that it found the weaker students seemed to do better in the more intensive format.¹⁸

The reason the intensive format may be a success is because studies have shown that professors “modify their teaching techniques for the intensive courses by incorporating more constructive, experimental learning and discussion than they do in a long semester class.”¹⁹ This, as mentioned earlier, is known to be a more effective teaching method and can increase student participation and engagement. Instructors in traditional formats are often forced to teach within the confines of 50 minutes and truly cannot become creative in their methodology. Students in longer 3-4 hour classes have time to interact with their peers and have more direct interaction with their professor.²⁰ When this is done multiple times over a short period of time deeper relationships and engagement can flourish.

Research Demonstrating Concerns

Some research has questioned the validity of these claims. For example:

Recent studies, however, revealed contrasting results. Some authors found support for block scheduling which resulted in higher achievement (Carroll 1994; Kahzaka 1997; Deuel 1999; Knight and DeLeon1999; Lewis et al. 2003), and others not (Bateson 1990; Lockwood 1995; Lawrence and MacPherson 2000; Nichols 2005). This seems the case particularly in subjects that might require some repeated instruction, like maths or science (Marchant and Paulson 2001). Nichols (2005) suggests that despite researchers’ best efforts, the multitude of variables that affect student achievement varies so greatly

17 Nadeau, Jay L. "From Gene To Protein: A 3-Week Intensive Course In Molecular Biology For Physical Scientists." *Biochemistry And Molecular Biology Education* 37.4 (2009): 211-219. *ERIC*. Web. 8 Oct. 2013. pg 213

18 Barry Lewis, et al. "Class Length And Student Performance: An Extended Study." *International Advances In Economic Research* 8.2 (2002): 160. *Business Source Complete*. Web. 19 Sept. 2013. pg 16

19 "Shorter Classes Are More Effective." *Machine Design* 80.11 (2008): 110-111. *Business Source Complete*. Web. 8 Oct. 2013.

20 Arrey, Lucas Nyenty. "Intensive Learning Versus Traditional Learning In Organic Chemistry." *Summer Academe* 5.(2005): 21-26. *Education Research Complete*. Web. 8 Oct. 2013.

that it becomes difficult to control these factors. This is especially the case in large survey studies.²¹

Also, it has been suggested the previously mentioned studies that show success may not be accounting for student engagement *before entering the course*. Perhaps students choosing block or intensive courses are already more motivated and higher achievers than those in traditional courses. Dr. Lucas Arrey in their paper "Intensive Learning Versus Traditional Learning in Organic Chemistry" states "there is no doubt that students in the intensive courses have a stronger motivation for success than their counterparts in traditional courses".²² Dr. Arrey attempted to demonstrate this by quoting feedback from one intensive course that had more than 90% of the students agree to the statement "too demanding, yet interesting and fun". They did conclude however, somewhat against their initial claim, that the course was a "wonderful" learning environment, which fostered positive attitudes that led to students having learning as their first priority creating better motivation and stamina than in traditional formats."²³

Dr. Linda Carrington during a literature review on intensive courses noted that academics in cognitive psychology support the "spacing effect" learning style - having repetition over time. This is countered by academics in educational psychology who seem to argue "students taking a class in a compressed or intensive scheduling format will perform as well, and sometimes even better, than students in traditional scheduling formats."²⁴ Some of the educational research notes, however, that courses that "require students to make use of prior knowledge and courses which require more analysis than memorization" may not be well suited for intensive formats.²⁵ Dr. Carrington discusses for example a study of a microeconomics courses that found diminished academic performance in those areas of economics that stress comprehension and analysis over mere recall. It found that summer students (compressed) did better than spring students (traditional schedule) on tests from the first half of the course that involved simple recalls of information and performed worse on the tests in second half of course, which involved comprehension, application, and analysis.²⁶ Though her own study into

21 Randler, Christoph, Konstanze Kranich, and Monika Eisele. "Block Scheduled Versus Traditional Biology Teaching—An Educational Experiment Using The Water Lily." *Instructional Science* 36.1 (2008): 17-25. *Education Research Complete*. Web. 8 Oct. 2013. pg 18

22 Arrey, Lucas Nyenty. "Intensive Learning Versus Traditional Learning In Organic Chemistry." *Summer Academe* 5.(2005): 21-26. *Education Research Complete*. Web. 8 Oct. 2013. pg 25

23 Ibid.

24 Carrington, Linda G. "The Impact Of Course Scheduling On Student Success In Intermediate Accounting." *American Journal Of Business Education* 3.4 (2010): 51-60. *Education Research Complete*. Web. 8 Oct. 2013. pg 51

25 Ibid.

26 Carrington 53

another accounting course showed that a 12 week semester was an ineffective means of teaching the material.²⁷

Relating this back to some of the current Canadian educational policy surrounding block courses, Waterloo University's regulations stating block courses that "only are pedagogically suitable" seem to support the idea that students cannot properly analyze and only memorize in such a short period. Quest takes an entirely different approach and argues that block courses are the only way students can properly do such.

Concerns:

Outside of the conclusive research being a concern, the University of Calgary also came up with their own list of pedagogical concerns and potential administrative logistical concerns as well:

Disadvantages:

- Limited amount of time for reading and assignments
- Heavy work loads with rapid assignment turnaround for instructors and students
- Students have to take time away from work to take block courses
- Students may not learn in one week what they would normally learn over thirteen weeks
- Some students do not want to take courses during the Labour Day long weekend.

Administrative issues:

- Rewarding faculty members for teaching block courses
- Deciding how a course ranks in terms of instructors' course loads
- Obtaining timely registration information
- Lack of university policies on block courses
- No norm for the value of block courses; credits range from none to one half-course
- A course offered during block week cannot be a prerequisite for another course unless the block week course is also offered during the semester
- High demands placed on instructors.²⁸

²⁷ Carrington 58

²⁸ <http://www.ucalgary.ca/pubs/Newsletters/Currents/Vol6.3/blockwork.html>

Questions Left to be Answered:

It is important to note that despite the studies mentioned in the report, they all analyze “intensive-format” courses which range anywhere from 2-4 weeks. The only “research” on “block-week” courses is the extremely limited feedback from professors and students in Canadian institutions since the pioneering of Quest in 2007.

One professor at the University of Alberta raised concern that pursuing this type of course might only be done to push along the idea of “education for a degree” instead of “education for the sake of education”. She felt it would be important to enter into these types of discussions with the goal being a unique pedagogical learning opportunity instead of a “quick 3 credits”.

Further, she felt that while a variety of teaching tools could be utilized, professors who don’t know any other way to teach might simply not use them. While an 8-hour class taught the right way could be incredibly engaging, an 8-hour power-point lecture could mean the student’s feel the opposite effect. It would thus be important that professors be equipped with the necessary teaching tools (for example utilizing the Centre for Teaching and Learning to do a series of workshops on how to properly teach longer classes in more interactive format) so that both they and the students are not thrown into something where everyone loses.

Canadian Universities and Block Week Courses

Multiple Canadian Universities have offered different variations of condensed versions of courses.

Dalhousie University offers a selection of courses in the field of biology that on average last approximately two weeks. These courses include a partial lecture component and actual fieldwork. An example of a course syllabus is attached as Appendix B.

The University of Manitoba offers something similar; however, label them as “summer institutes”. They last for two weeks and result in 6 credit hours. One such course is “Education for Sustainability”, which is described on the University website as follows:

Education for Sustainability
July 2 - 15, 2014

The United Nations have declared 2005-2014 the Decade of Education for Sustainable Development; the Council of Ministers of Education Canada has declared Education for

Sustainable Development to be one of eight key educational priorities for student learning in Canada; and the Manitoba Government has identified Education for Sustainable Development as one of five Priority Action Areas in K-12 schooling. Working toward a sustainable future has become a recognized societal and personal responsibility. Education plays a crucial role in this responsibility. But what is meant by “sustainability”? What does a sustainable future look like? What does a sustainable future require of Manitobans and Canadians in terms of how they live their lives? What is the responsibility and role of education and schooling in working toward a sustainable future? What curricular and instructional implications does the idea of teaching and learning for a sustainable future have? What strategies have been suggested for classroom teachers, administrators, and other educators for implementing education for sustainability? This summer institute will engage participants in these and related questions. The institute is designed to assist school educators with developing a deeper understanding of, commitment toward, and competency in implementing education for sustainability in their respective educational contexts. Students must register in a total of six (6) credit hours.

Dr. Jennifer Katz, a professor of Education who has taught “Education for Sustainability” explained that:

“I am not aware of research related to them (block week courses), but they are a common form of professional development in many trades and professions where certification is required. It cannot be lecture based. No one can talk, or listen, for 7 hours a day!

Pedagogy must include hands on experiences, group work, and other means of engaging students in an immersion/intensive experience related to the topic.

This course is similar to what in 2012 the University of Ottawa announced as a new summer institute in “Community Nutrition and Public Health Agriculture”:

The University of Ottawa, along with Université Laval and the Université d’État d’Haïti, is launching the first Summer Institute in Community Nutrition and Public Health Agriculture in Haiti, part of the Canada-Haiti Academic Projects Scholarship. The Summer Institute meets the need for capacity-building in nutrition to address the urgent food and nutrition situation of Haitian families caused by the 2010 earthquake.²⁹

The University of Calgary Faculty of Law mandates its full-time students each year to be taking a block week course. This course is offered at the same time each year (first week of January) and is building off the same topic (Dispute Resolution I in first year, Dispute

²⁹ <http://www.uottawa.ca/medias/media-release-2597.html>

Resolution II in second year, Dispute Resolution III in third year). The faculty offers a different grading scheme for these courses compared to regular session, as noted in the course descriptions:

LAW 411 Dispute Resolution I: Interviewing and Counseling, H, 3 credits (1-0)

An introduction to dispute resolution, including: conflict analysis; an overview of dispute resolution processes; fact-finding through client interviewing; client-centered client counseling; ethical issues.

Note: This course is Graded CR, C-, D or F

LAW 513 Dispute Resolution II: Negotiation and Mediation, H, 3 credits (3-0)

An overview of the spectrum of the consensual dispute resolution process, including negotiation, collaborative lawyering, mediation, and judicial dispute resolution (JDR).

The emphasis is on interest-based bargaining and mediation. Note: This course is Graded CR, C-, D or F

LAW 611 Dispute Resolution III: Adjudication, H, 3 credits (3-0)

An overview of the binding, third-party decision making processes of dispute resolution, and their commonalities and differences. The focus is on two of the following three adjudication processes: arbitrations, administrative hearings and trials.

Note: This course is Graded CR, C-, D or F

Additionally, the University of Calgary Faculty of Environmental Design offers each year a set of block week courses. As what was noted by the President of Quest University as a possibility for this style of course, the faculty contacts individuals in industry or academia to teach a weeklong intensive course to go alongside a public lecture. There is a course offered in October, January, and February and students' are mandated to take one block week course as least once and have the option of taking it again as an elective. Under Appendix C are the syllabi for 3 block week courses offered in the fall of 2013.

At McMaster University students in the Faculty of Medicine have the option of taking a two-week block elective at one of the University's three teaching hospitals in "emergency medicine". These courses do not have a lecture component, but instead are taught through working directly with a physician³⁰.

The University of Waterloo offers multiple block week courses under the Faculty of Environment, most prominently in Environment and Resource Studies. One such course is the ERS 382, which is a collaboration between the University of Waterloo and the Niagara Escarpment Commission (NEC). This course is unique in that while all the course

³⁰ <https://www.google.ca/webhp?sourceid=chrome-instant&ion=1&ie=UTF-8#q=Mcmaster+University+block+week+courses&safe=off>

class time or fieldwork happens in August; students are required to complete an essay for mid-October. Under Appendix D is the course syllabus for the course in 2012.

Based on these findings it is obvious that the utilization of courses ranging from 1-3 weeks is becoming increasingly popular at Canadian Universities. Regardless of the research found in this report, some courses are entirely lecture based, while others have a more “hands on” approach. There is much possibility of what can be done, however, with such a wide range of pedagogical structures and a diverse set of faculties at the University of Alberta, how exactly to go about advocating the University of Alberta to implement these courses may require more direct student consultation into what exactly their needs and desires would be to better focus efforts.

DRAFT

Appendix A

The University of Calgary has set aside five days at the start of Fall and Winter Terms as Block Weeks mainly for the offering of regular courses in an intensive manner. Dates for Block Weeks are given in the Academic Schedule.

The following regulations apply to courses offered during Block Weeks:

Block Week is for the offering of regular credit and non-credit courses. Some courses will be available only in a Block Week format.

Lectures for Block Week courses must be held within the days set aside at the beginning of Fall and Winter Terms. Permission of the Provost and Vice-President (Academic) is required to start or end a Block Week course earlier or later.

The number of hours for attendance each day during Block Week shall not exceed eight hours. The total number of hours is recommended to approximate those offered during a regular term.

Junior (200-level) courses may not be offered during Fall Term Block Week. The last day to drop a Block Week course (without it appearing on the student's transcript) shall be the end of the first day of lectures.

The last day to withdraw from a Block Week course shall be the final day of lectures during the Block Week.

Block Week courses beginning in the Fall may extend over both the Fall and Winter

Attendance at lectures, tutorials, laboratories, etc. will not be required beyond the duration of the Block Week(s). Students may be required to meet with instructors regarding assignments during the term.

Although lectures, etc. are completed during the Block Week, students should be prepared to complete assignments and a final examination during the remainder of the term.

Final grades for Block Week courses will not be required until the end of the term in which the course is offered.

Final examinations for credit Block Week courses will be held during the regular examination period at the end of the term. In lieu of a final examination, a take-home final examination can be given out on the last day of lectures. Tests held on the last day

of lectures cannot be worth more than 10 per cent of the final grade. Exceptions to these regulations require the approval of the Provost and Vice-President (Academic).

Pre-term study is not permitted in Block Week courses unless the deadline to register in the course is one month in advance of the start of lectures. Sending of pre-term study materials to registered students shall be the responsibility of the department and/or faculty offering the course.

A Block Week course can be a prerequisite for a regular credit course. Normally, a prerequisite course will not be offered in the Block Week immediately preceding the term in which the follow-up course is being offered.

Where a mandatory course for a degree is available only in the Block Week format, departments shall make arrangements for students who, for legitimate reasons, are unable to complete a course during Block Week.

Use of a Block Week format will not be indicated on the student's transcript of record. It is at the discretion of the faculty in which a student is registered as to the number of courses that a student may attempt during a term, including Block Week courses. All Block Week courses will be subject to the GFC approved policy on Universal Student Ratings of Instruction.

Biol 2605 Marine Life of Nova Scotia - Syllabus

Instructor: Dave Keith: email - keithdm@dal.ca. Office: Biol 4050

Dates: Monday July 21st - Saturday August 2nd

Lectures: 9:25-11:55 Monday through Saturday in LSC C220

Laboratories: 13:05-16:05 Monday through Saturday in LSC 4009

Field Trips: 9:00 - 17:00 (See schedule for tentative dates)

Multi-Night Trip: July 26th - July 29th - [Harrison Lewis Centre](#)

- Students should wear sneakers or (preferably) hiking/waterproof boots on field trips (water shoes are ideal), you will get your feet wet. Minivans or buses will be used to transport students to and from field trip sites outside of metro Halifax. You will need your waterproof field notebook (provided), pencil, thinking cap (a hat will suffice), sunscreen, jacket, water, and food. There will be 4 all-day field trips (see provisional schedule) and one multi-night field trip (details below).

Pre-requisite: One year of University courses (or instructor approval)

- Field books:**
1. **A Field Guide to the Atlantic Seashore: From the Bay of Fundy to Cape Hatteras (Gosner) - Peterson Field Guides - Required**
 2. **Students must also have a waterproof “Rite in the Rain” field notebook**

- Textbooks:**
1. Marine Biology 8th Edition (Castro and Huber) - Recommended & available from instructor
 2. Atlantic Shorelines: Natural History and Ecology (Bertness) - Recommended & available from instructor

Goals: In this course you will discover the diversity of Marine Life in Nova Scotia along with the beauty and importance of the ecosystems in which they inhabit. Simple student driven field studies will be performed in coastal ecosystems. At the end of the course it is expected that you can identify numerous species found upon the coasts of Nova Scotia, understand their niches within an ecosystem, have gained an appreciation of the how marine life/ecosystems fit into the broader context of life on Earth, and have a basic understanding of how the scientific method works to answer questions. The course consists of three core components

Core Components

Lectures: Using ecosystems as our base unit, we explore the species inhabiting the major coastal and marine ecosystems of Nova Scotia. The species will be explored in relation to the taxonomy, their role within the ecosystem, and species conservation.

Field trips: Observation and simple student led field studies will be used to expose students to the Marine life of Nova Scotia in various coastal ecosystems. The field trips include a 4 day, 3 night field trip to the Harrison Lewis Centre.

Biol 2605 Marine Life of Nova Scotia - Syllabus

Laboratories: While in Halifax we will examine marine life discovered during the field trips in the lab. During the middle weekend we will stay at the Harrison Lewis Centre for 4 days (3 nights) exploring the local coastal ecosystems and developing your group projects.

Grading: There are 3 components to the marking scheme

<i>Component</i>	<i>Description</i>	<i>Mark</i>	<i>Total</i>
<i>Mini Quizzes</i>	One each non-field day during the morning lecture period	7%	50%
<i>Field Project</i>	Simple write up of your Harrison Lewis Center field study (teams of 3 or 4)	30%	30%
<i>Participation</i>	During lectures, labs, field trips, and post field trip discussions	20%	20%

Grading Scale: The scale is the same as other Dalhousie science courses:

A+ 90-100%	A 85-89%	A- 80-84%
B+ 75-79%	B 70-74%	B- 65-69%
C+ 62-64%	C 58-61%	C- 55-57%
D 50-54%	F <50%	

Late Penalties: There will be no make-up mini-quizzes, students absent from a quiz will receive a 0 unless a signed note explaining the absence is obtained from your doctor. The student projects are due by 4:00 pm on Saturday August 2nd. A late penalty of 20% per day will be assessed to all late papers, and papers will not be accepted after August 7th without a signed doctors note.

Field Projects Before the first field trip, students will be assigned into teams of 3 or 4 students. During the day long field trips each team will spend the day observing species in the different ecosystems (rocky shore, salt marsh, and sandy beach), collecting samples for analysis, and recording their observations in their field notebooks. The following afternoon each group will analysis their samples and write a description of the biology of each field site. With assistance from the instructor the students will take the class observations and develop questions that they would be interested in answering during the multi-night trip to the Harrison Lewis Centre. In collaboration with the instructor each group will then develop simple a field study to address the question they are most interested in and we will perform the field study while at the Harrison Lewis Centre. The grading will be based upon 3 components:

1. The student field notebooks will be graded based upon the quality of observations made during the field trips. **This will be worth 25% of project grade.**
2. The field study itself will be graded, this will be based upon the questions asked and the implementation of the projects in the field. **This will be worth 25% of project grade.**
3. A final report will be written in groups during the last week of classes with the instructor available based on the results of one of the groups field projects. **This will be worth 50% of the project grade.**

Biol 2605 Marine Life of Nova Scotia - Syllabus

Project Report: The report will be a short summary of your field study using a simple report format. The report consists of 4 components, each component will be explained in more detail during the laboratory sessions.

1. **Introduction** Maximum of 400 words. Relevant background information about the species and ecosystem are primary components. The section should end with a short paragraph explaining the “objective(s)” of the field study. The goal here is to get the reader interested in your field study, and give some background on the species and ecosystem so they understand why you performed the study (and “because I took the course” isn’t sufficient!). There should be at least 2 references in this section, simple references to the course notes or relevant websites will suffice. **Worth 20% of report grade**
2. **Methods** Approximately 200 words, (may vary depending on your field study) describing what you did in the field. The reader should be able to repeat your field study after reading this section. **Worth 20% of report grade**
3. **Results** Typically less than 200 words, one or two paragraphs should be sufficient (though again this may vary depending on your field study) describing the results of your field study. This section should include at least one figure. **Worth 30% of report grade**
4. **Discussion** Maximum of 400 words, often the most difficult section to write! The goal of this section is to explain your results and put them in a broader context. Two to three references in this section based on class notes or relevant websites will suffice. Questions you can answer include:
 - (a) Do the results agree with what you originally suspected would happen?
 - (b) What do the results mean for the species, ecosystem, conservation, etc?
 - (c) Was there anything unexpected from your results?
 - (d) Was there anything that occurred during your field study that may have led to unexpected results (e.g. it rained, somebody stepped on your species, etc!)? **Worth 30% of report grade.**

HLC Multi-Day

Field Trip: This will be a 4 day 3 night trip to the [Harrison Lewis Centre \(HLC\)](#) located on the South shore of Nova Scotia. We will leave Halifax at 9:00 am on Saturday July 26th, and will leave the HLC shortly after lunch on Tuesday July 29th. Students will stay in cabins located at the HLC, and we will have access to both a scientific laboratory and a large cook-house/gathering area. The HLC is a five minute walk from a beautiful coastal ecosystem that has experienced little impact from humans, and it is a short drive from the [Kejimikujik Seaside Adjunct](#). The facility also has a large fire pit with an ample supply of wood.

Food On July 26th supper will be provided, on July 27th and 28th Breakfast, Lunch, & Supper are provided, and on July 29th Breakfast and lunch are provided. We suggest you bring along some snacks in addition to what we provide as you will get hungry in the field!

Special Needs Please advise before/at the start of the course of any dietary restrictions, allergies, or other special needs, we will do our best to accommodate you

Schedule: The tentative schedule is as follows, the field trips may have to be adjusted due to un-foreseen circumstances.

Date	Week 1: July 21st - July 27th	
	9:25 - 11:55 (Lecture)	13:05 - 16:05 (Labs)
Mon. July 21 st	Course overview & Science and Biology 101	Introduction to Taxonomy I & Laboratory methods
Tue. July 22 nd	Field Trip #1 - AquaPrime Mussel Farm and Clam Harbour	
Wed. July 23 rd	Introduction to Taxonomy II & III	Squid dissection
Thurs. July 24 th	Introduction to Marine Biology & Ecology	Analysis of Field Samples
Fri. July 25 th	Coastal Ecosystems of N.S. I-II	Coastal Ecosystems of N.S. III
Sat. July 26 th	Multi-Night Field Trip - Harrison Lewis Center - Initial Field Explorations	
Sun. July 27 th	Multi-Night Field Trip - Harrison Lewis Center - Initial Field Explorations	
	Week 2: July 28th - August 2nd	
Mon. July 28 th	Multi-Night Field Trip - Harrison Lewis Center - Initial Field Explorations	
Tue. July 29 th	Multi-Night Field Trip - Harrison Lewis Center - Initial Field Explorations	
Wed. July 30 th	Marine Ecosystems of N.S. I & II	Analysis of Field Samples
Thurs. July 31 st	Marine Ecosystems of N.S. III	Analysis of Field Samples
Tue. Aug. 1 st	Field Trip #2 - Bay of Fundy	
Sat. Aug 2 nd	Marine Conservation in N.S.	Finish & Submit Final Projects

INSTRUCTOR

Barry Wylant
bwylant@ucalgary.ca
403-220-8456

INTRODUCTION

The aim of this course is to develop design drawing and rendering skills for design students, across disciplines. The ability to draw, and importantly, sketch, is a key communication and ideation skill for designers.

Exercises will be assigned in every class. Students are expected to participate fully in the classes and complete all exercises undertaken in the course. This is essential as earlier exercises inform and provide a basis for later ones. All exercises are intended to enhance the student's ability to generate and communicate design ideas in 2D.

COURSE OBJECTIVES

The course objectives will cover the following areas:

- To enhance visual design observation skills;
- To enhance 2D sketching and freehand drawing skills;
- To enhance drawing construction techniques;
- To introduce and enhance rendering techniques.

TEACHING APPROACH

During the course exercises will be assigned, demonstrations and lectures will be offered, and students will be expected to complete assigned exercises.

COURSE CONTENT

The course will cover the following topic areas:

- Drawing elements: eg. Line and line weight, shapes, forms, additive and subtractive forms, shading techniques, etc.
- Drawing systems: orthographic, isometric and perspective.
- Quick sketching techniques.
- Perspective construction, shading and rendering techniques in different media.

CLASS SCHEDULE

The course runs from 9am until 5pm, Wednesday January 2nd until Monday January 7th and includes Saturday, January 5th.

MEANS OF EVALUATION

A minimum level of design drawing competency must be demonstrated to pass the course. A number of exercises will be handed out daily. A portfolio of these are to be submitted at the end of class for evaluation. The course is evaluated on a credit/fail basis.

SPECIAL BUDGETARY REQUIREMENTS

DRAWING MATERIALS REQUIRED:

- 18 x 26" block of newsprint
- drawing pencils: 2H, HB, 3B, 4B, 6B or higher
- White drawing eraser
- A roll of tracing paper is optional but handy
- Drawing straight edges (drafting triangle or set square, etc.)
- Circle and elliptical templates are also optional (and useful) but not required.
- A metric scale
- Drafting masking tape
- Matt knife and 18" steel ruler
- Pantone Markers (exclusively) Cool Grey 2, Cool Grey 8 and one light pastel colour marker of your colour choice.

Notes:

1. Written work, term assignments and other course related work may only be submitted by e-mail if prior permission to do so has been obtained from the course instructor. Submissions must come from an official University of Calgary (ucalgary) email account.
2. It is the student's responsibility to request academic accommodations. If you are a student with a documented disability who may require academic accommodation and have not registered with the Disability Resource Centre, please contact their office at 220-8237. (<http://www.ucalgary.ca/drc/node/46>) Students who have not registered with the Disability Resource Centre are not eligible for formal academic accommodation. You are also required to discuss your needs with your instructor no later than fourteen (14) days after the start of this course.
3. Plagiarism - Plagiarism involves submitting or presenting work in a course as if it were the student's own work done expressly for that particular course when, in fact, it is not. Most commonly plagiarism exists when:(a) the work submitted or presented was done, in whole or in part, by an individual other than the one submitting or presenting the work (this includes having another impersonate the student or otherwise substituting the work of another for one's own in an examination or test),(b) parts of the work are taken from another source without reference to the original author,(c) the whole work (e.g., an essay) is copied from another source, and/or,(d) a student submits or presents work in one course which has also been submitted in another course(although it may be completely original with that student) without the knowledge of or prior agreement of the instructor involved. While it is recognized that scholarly work often involves reference to the ideas, data and conclusions of other scholars, intellectual honesty requires that such references be explicitly and clearly noted. Plagiarism is an extremely serious academic offence. It is recognized that clause (d) does not prevent a graduate student incorporating work previously done by him or her in a thesis. Any suspicion of plagiarism will be reported to the Dean, and dealt with as per the regulations in the University of Calgary Graduate Calendar.
4. Information regarding the Freedom of Information and Protection of Privacy Act (<http://www.ucalgary.ca/secretariat/privacy>) and how this impacts the receipt and delivery of course material
5. Emergency Evacuation/Assembly Points (<http://www.ucalgary.ca/emergencyplan/assemblypoints>)
6. Safewalk information (<http://www.ucalgary.ca/security/safewalk>)
7. Contact Info for: Student Union (<http://www.su.ucalgary.ca/page/affordability-accessibility/contact>); Graduate Student representative(<http://www.ucalgary.ca/gsa/>) and Student Ombudsman's Office (<http://www.su.ucalgary.ca/page/quality-education/academic-services/student-rights>).

**ADVANCED SPECIAL TOPICS IN ENVIRONMENTAL DESIGN
SOMERVILLE CHARETTE**

EVDB 697 Q(3-0)

Vera Parlac, veraparlac@yahoo.com [course coordinator]
Brigitte Shim, Visiting Lecturer

Winter 2013

Class Time: Block Week 09:00 - 17:00pm

Introduction:

This course focuses on thematic inquiry and design related to urban design, architecture, environmental science, industrial design and planning. The topic of this course changes every year and depends on the visiting lecturer's focus of design research and/or work.

The William Lyon Somerville Visiting Lectureship was established by an endowment given to the University of Calgary by the late Mrs. A.G. Burton of Calgary in memory of her father. The gift was matched by the University to create a fund for the maintenance of an annual visiting distinguished lectureship program in Architecture, within the Faculty of Environmental Design. The William Lyon Somerville Visiting Lectureship is designed to bring a visiting practitioner, academic or critic to the Architecture program annually. The visiting lecturer conducts a block course with the students and holds an annual lecture concerning the subject of Architecture for the benefit of the University and the Community it serves. The program was inaugurated in February 1992.

Recipients (Last 10 years)

2003 Cedric Price, Cedric Price Architects, London
2004 Jacques Rousseau, Montréal
2005 Federico Sorriano, Madrid
2006 Burton Hamfelt, S333 Architecture and Urbanism, Amsterdam
2007 Alison Brooks, Alison Brooks Architects, London
2008 Koen van Velsen, architectenbureau K. van Velsen b.v., Hilversum
2009 Hrvoje Njiric, njiric+ arhitekti, Zagreb
2010 Mark Smout, Smout Allen, London
2011 Adam Caruso, Caruso St. John Architects, London
2012 Michael Weinstock, Architectural Association, London

Objectives:

1. To gain insight and experience in contemporary issues in architecture and design.
2. To learn of alternative strategies in contemporary design.
3. To develop skills in teamwork, 2D and 3D representation, and fabrication.

Teaching Approach

This course explores contemporary issues in architectural design through an intense 5-day design charrette. This is led by the William Lyon Somerville Visiting Lecturer, an architect of international reputation. The visitor sets the theme and structure for the charrette in consultation with the course manager. The course is offered once a year, during the January block week, and is considered an important event in the annual cycle of the MArch curriculum. It is open to MArch 1 and MArch 2 students (Foundation Year students may take the course with the permission of the manager) as an elective course.

Content: Topic Areas

The course Content is defined each year by the visitor (William Lyon Somerville Visiting Lecturer). Typically, the charrette has a strong design focus and is organized in a studio format, whereby contemporary issues are explored through a project or projects (usually in teams). The visiting guest also presents their work, informally to the charrette group and in a public forum, as a way of conveying their themes and approaches. The final review creates a forum for students and guests to share their work.

This year (2013) This advanced design studio seeks to explore emerging microsystems as a vehicle integrating and linking to specific scale of urbanism with the scale of building. Students will explore together an existing Calgary neighborhood to better understand the catalytic role that laneways or secondary streets can play in densifying and intensifying the City of Calgary. Laneways, alleys, mews, rear streets constitute an emerging microsystem situated within our urban centers which can help us reimagine a more compact and healthy urbanism. Students will work together to examine the project at a neighborhood scale understanding patterns of occupation and built form. Each student will be asked to propose an innovative design response designing an individual laneway dwelling which will contribute to and reinforce its local context.

Means of Evaluation:

Students will be evaluated on their class participation, reviews and their work as evidenced in the presentations.

Proficiency in the course is demonstrated by the student's ability to analyze and detail building assemblies and discuss the merits and deficiencies of the various materials for particular applications. Final Evaluation is based on the following:

Final Exam	50%
Studio Project	50%

EVDB 697.33 LOS ANGELES FIELD TRIP

Course Manager: John Brown

Winter 2013

Introduction

This course is an introduction to the architecture and urban landscape of Los Angeles. Through a week long field trip students will learn about the built environment of Southern California.

Objectives

- To gain an understanding and appreciation of the architecture of southern California.
- To study the various cultural and environmental forces that have shaped the city of Los Angeles.
- To gain an ability to analyze an existing architectural project and document that analysis through floor plans, photographs and diagrams.

Content: Topic Areas

The specific sites to be visited in any given year are dependent on availability and interest. A tentative itinerary is as follows:

Wednesday, January 2

Arrive Los Angeles

Thursday, January 3

Gamble House by Greene and Greene
Neutra Health House by Neutra
Hollyhock House by Frank Lloyd Wright
Schindler Chase House by Schindler

Friday January 4

Salk Institute by Kahn
Neuroscience Institute by Tsien and Williams
University Theatre by Predock
San Juan Capistrano Library by Graves
Beach House by Schindler

Saturday January 5

Disney Concert Hall by Gehry
Cathedral of Our City of Angels, Moneo
Cal-Trans Headquarters, Morphosis
International School by Morphosis
The Bradbury Building
The Spanish Market
Wayfarer's Chapel by Lloyd Wright

Sunday January 6

Getty Museum by Meier
Museum of Radio & Television by Meier
Prada Store by Koolhaus
Retail Center by Frank Lloyd Wright
Bookstore by Starck
Rodeo Drive
Museum of Jurassic Technology

Monday January 7

Leave Los Angeles

Course Assignment

A 20 page graphic and written documentation of 2 of the major projects on the tour including plans, analytical diagrams, and photographs. The projects will be assigned prior to departure.

Course Assignment	90%
Tour attendance	10%

Anticipated Costs

In addition to course registration and the International fee, students are responsible for their meals and air travel to and from Los Angeles. Airfare is typically around \$500. The Santa Monica hostel has a commercial kitchen and lots of refrigerator space if you care to cook your own meals.

The International Fee covers the cost of accommodation [additional nights can be arranged on your behalf and your fee will be adjusted accordingly], bus transportation, and all entrance fees. This fee is determined by the number of students attending, in past years this fee has been approximately \$505 a person.

Please contact Crystal Hickey cehickey@ucalgary.ca or John Brown brownj@ucalgary.ca if you have any further questions.

To Do List ...

EVDS

- Contact Crystal Hickey, in EVDS, to hold your space in the program ASAP – first come first served!
- Register for your class
Deadline November 30
- _____

International Center

- Register on RAISA & apply for the program, this includes a letter of intent and an appropriate passport like photo. The photo will be used in the event of an emergency. *Please refrain from showing your artsy or party side in these photos.*
Deadline October 15
- Pay your international program fees
Deadline October 26
- Sign and submit all paper work. This will include: scans of your passport, proof of travel insurance, proof of medical insurance [if using the GSA insurance, a letter from Grad Studies is required – don't wait until the last minute to obtain this as it does take time]
Deadline November 30
- Attend a pre-departure orientation if you have not already.
- * **You will require proof of travel insurance for the international center, please ensure you have purchased it. This can be done for a fraction of the cost with Travel Cuts within 48 hours of purchasing your flights.**

Misc

- Register with Risk Management <http://www.ucalgary.ca/riskmgmt/trvlreg>
Deadline November 30

ERS 382 ENVIRONMENTAL MONITORING

Spring 2012

Monday August 20-Tuesday August 28, 2012

Course Outline

Instructors

Lisa Grbinicek, Senior Strategic Advisor, Niagara Escarpment Commission

Anne Marie Laurence, Ecological Monitoring Specialist, Niagara Escarpment Commission

Larry Lamb, Adjunct Professor, Faculty of Environment

Ken Oakes, Adjunct Professor, Environment and Resource Studies

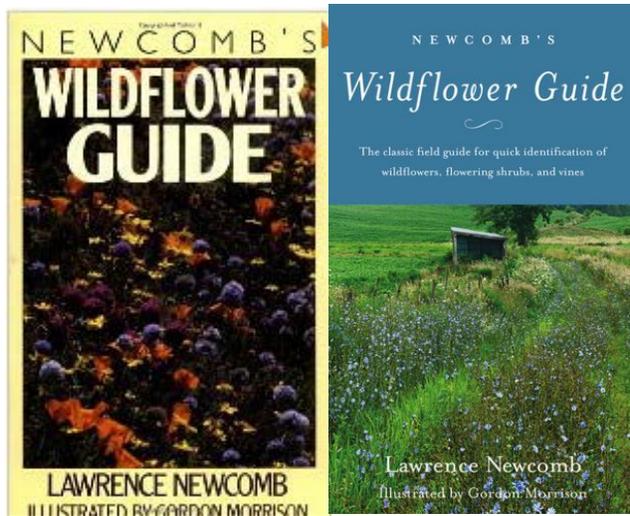
Prereq: ENVS 200 or BIOL 250

Required Books:

Newcomb, L., 1989. *Wildflower Guide, first edition*. Little, Brown & Company, 490 pp.

ISBN-13: 9780316604420

Least Expensive Option is online, Barnes & Noble.com, \$13.50 paperback.



(different covers, either is acceptable)

Required Readings Before Exercise: Please read the forest biodiversity analysis report, paying particular attention to the Hockley Valley Provincial Nature Reserve plot, prior to August 20th.

http://www.escarpment.org/files/file.php?fileid=fileLixevIeiRA&filename=file_Forest_Monitoring_Alone_the_Niagara_Escarpment_March20111.pdf

Course Location

Hockley Valley Provincial Nature Reserve, near Orangeville, ON

<http://www.ontarioparks.com/english/hock.html>

Course Description

This course is a collaborative effort between the University of Waterloo's ERS Department and the Niagara Escarpment Commission (NEC), the regulatory agency that administers scenic and natural lands along the Niagara Escarpment geological formation stretching from Niagara Falls in the south to Tobermory in the north. The Niagara Escarpment Plan (NEP) is the Provincial land use plan that is administered by the NEC, and provides the objectives and policies for lands within the Niagara Escarpment Plan Area, which are also recognized as a UNESCO World Biosphere Reserve. The NEC is required to implement the Ontario's Niagara Escarpment Monitoring Program (ONE MP), to monitor and regularly report on indicators that assess the health and integrity of the NEP Area, and to use the data to support policy review. A substantial part of this monitoring is accomplished through the work of the students in this course. Thus ERS 382 is a field course designed to provide students with the theoretical and practical knowledge of environmental monitoring in the context of the Niagara Escarpment Biosphere Reserve.

The course consists of three primary components:

1. An overview of the Niagara Escarpment Commission, its mandate, activities, and lands; the international Man and the Biosphere Program and its forest biodiversity monitoring project (tree, shrub/sapling, ground cover and tree health monitoring); biosphere reserves and land use planning and management. You will be made familiar with recent advances in ecosystem planning, the Ontario Niagara Escarpment (ONE) Monitoring Program, the ONE Monitoring Framework, and information management and analysis techniques.
2. Hands-on field experience in a complete, comprehensive vegetation monitoring exercise in a permanent one-hectare (100x100 m) plot of native forest as well as an introduction to some other monitoring procedures.
3. Data input using computer software, as well as verification of monitoring information.

In addition, there will be opportunities to learn about the ecology and natural history of the Niagara Escarpment and the activities of individuals, organizations, and agencies that contribute to the ecological well-being of the area.

The Forest Biodiversity Monitoring Protocol

We will be using a biodiversity monitoring procedure or “protocol” prepared by the Smithsonian Institution in Washington developed for the International Man and the Biosphere Program (now called the Monitoring and Assessment of Biodiversity Program) sponsored by the United Nations (hence the term SI/MAB protocol). This protocol is designed for establishing permanent one hectare plots for long-term monitoring of forest biodiversity. The Ecological Monitoring and Assessment Network (EMAN) of Environment Canada endorsed this protocol as the “national standard” for monitoring forest biodiversity in Canada’s temperate forests. The protocol has been adapted for use in southern Ontario forests, and NEC staff have further refined the protocols for use in Escarpment plots. Ecological knowledge reveals the importance of biodiversity in maintaining the integrity of natural systems. Thus, it is important to have baseline information on the composition, structure, and function of ecosystems so that the health of a system is known, and thus the effects of perturbations caused by stressors can be understood and appropriate policies implemented for preservation or remediation.

These SI/MAB plots are already showing their usefulness. About 15 years ago a severe ice storm paralyzed eastern Ontario and neighbouring Quebec. The effect on trees and forests was devastating. Fortunately, a SI/MAB plot had been established in the area affected and thus there was a good picture in hand of the characteristics of the pristine mature native forest. Most of the large trees in the experimental plot were brought to the ground by the ice storm and there was little growth intact above a few meters. However, the monitoring in this plot now assumed a unique importance: because of the wealth of data describing the original forest, subsequent monitoring will show how such a forest recovers over time and whether the eventual mature forest at the site will resemble the original forest or evolve into something different.

A common tree species in the five Escarpment plots monitored by this class is white ash (*Fraxinus americana*). A few years ago a shipment of goods from China was delivered to

Detroit. The goods were packed in wooden crates infested with the larvae of the emerald ash borer, a beetle that feeds voraciously on living ash trees. Attempts to contain the infestation to Detroit were unsuccessful, and the ash borer is now sweeping up the forests of southern Ontario and has already arrived in the area of London. Millions of ash trees are at risk. It will be interesting to document the effects of the invasion of the ash borer in our five plots. How will it affect species composition and the overall productivity of the forest? Air pollution, climate change and recreational use (several of our plots are on or near the Bruce Trail) may also have effects. All of the Escarpment plots are recovering from varying degrees of past human disturbance, which is apparent when examining species composition and distribution. However, the majority of the forests contained by the plots are also showing signs of approaching an older growth state (*e.g.* based on the presence of shade-tolerant canopy species, trees with relatively large diameters, relatively large stand basal area). To date, the results of data analysis suggest that the Escarpment plots consist of healthy, sugar-maple (*Acer saccharum*) dominated forests that represent stable cores of the greater forested landscape, with little change in biodiversity between monitoring intervals. With continued protection from human disturbance through the implementation of the policies of the Niagara Escarpment Plan (which includes the requirement to develop park management plans that align with NEP policies and objectives), the sites may eventually provide mature forest conditions not commonly found in southern Ontario.

Tree health is also monitored in a sub-sample of the one-hectare plot using an EMAN-endorsed protocol developed by the Canadian Forest Service (CFS). This data has been collected in the Escarpment plots since 1999. The addition of this protocol to the ONE Monitoring Program is useful in order to identify and track possible pest infestations or disease (*e.g.* butternut canker, beech bark disease) and their impacts on biodiversity. If a notable decline in a particular species is identified, CFS can be contacted for further investigation.

There is now a growing international program, initiated by the United Nations Educational, Scientific, and Cultural Organization, to protect major representative natural areas as World Biosphere Reserves. The Niagara Escarpment was proclaimed a World Biosphere Reserve more than 20 years ago, and this provides the NEC with an additional compelling reason for setting up a chain of stations or plots for monitoring a number of pertinent ecological factors.

The main reason for establishing monitoring plots along the Niagara Escarpment was to answer the question, “Is the Niagara Escarpment Plan, with its unique set of environmental land use policies, achieving its goals for the preservation of natural areas under its jurisdiction”? The Plan implements the NEC Planning and Development Act which was created “*to provide for the maintenance of the Niagara Escarpment and land in its vicinity substantially as a continuous natural environment, and to ensure only such development occurs as is compatible with the natural environment.*” Your work in this course will not only teach you about environmental monitoring, but you will also make an important contribution to the knowledge base about Escarpment natural area that will be used and reused for planning decisions in the future.

Through the NEC-UW partnership 5 “control” (undisturbed) SI/MAB plots have been established and are monitored on a 5-year rotational basis at Halton Agreement Forest near Milton (1996, 2001, 2006, 2011), Hockley Valley Provincial Nature Reserve (1997, 2002, 2007, 2012), Cabot Head Provincial Nature Reserve beside the Bruce Peninsula National Park (1998, 2003, 2008), the Hope Bay Provincial Nature Reserve (1999, 2004, 2009) and the Skinner’s Bluff Management Area near Wiarton (2000, 2005, 2010). All of the plots are located within core protected areas of the Biosphere Reserve. The Ecological Monitoring and Assessment Network, which oversees all such monitoring in Canada, periodically evaluates the accuracy of the work done on our plots. They have found the work to be exemplary. The Escarpment plots are part of a network of plots in Biosphere Reserves and other protected areas across Canada and worldwide.

Course Objectives

1. To provide students with familiarity or understanding of recent advances in ecosystem planning, biosphere reserves, the ONE Monitoring Program, information management and analysis techniques, and communication of monitoring information.
2. Provide an introduction to other monitoring programs and techniques operating along the Niagara Escarpment.
3. To give students an opportunity to learn about the conduct of systematic field work through hands-on monitoring experience at the “plot” scale, using protocols developed for

monitoring forest biodiversity, as well as other monitoring techniques (*e.g.* tree health monitoring).

4. To complete the fourth 5-year monitoring review, data collection, data input and mapping, and quality checks for the monitoring.
5. To provide students with the chance to meet professionals engaged in various ways in protecting the natural environment (*e.g.*, ecological and environmental management and administration, policy setting and implementation, scientific research) and learn about how they practice their professions.
6. To provide students with the opportunity to participate in focused group discussion to evaluate the monitoring activities, generate ideas for further research, and provide an evaluation of the course.
7. To establish a “learning community” that nurtures both individual creativity and mutual assistance, and operates successfully at both the pedagogical and social levels.
8. Completion of an individual project or report based on the monitoring literature and issues, case studies, or the analysis and evaluation of data collected in the course work.
9. To provide you with opportunities to experience nature, to sense it in all possible ways, learn to wonder about it, appreciate its beauty, and reflect on our place in the natural world.

Assignments and Evaluation

1. Participation and learning (30% of mark). You will be assessed on your general experience in our learning community, your cooperative performance in the field, your conscientious participation as a member of the field research team, your contribution to maintaining the camp and necessary activities, and any special creative touches or contributions. To assist us in doing this, we ask you to submit 2 short statements. One, no more than one page long, should list your contributions to the course. The second, up to two pages, should reflect on your learning outcomes. Learning outcomes can be varied, from the methods and techniques you have learned, experiences in the field, working in teams, coming to appreciate nature, learning to observe, etc. Some students in the past have had quite transformative experiences. Due date for these 2 short assignments is September 11, 2012.

2. Quality of field work and data entry (40% of total). On a team/group basis, you will be assessed on the general quality of your field work and data entry. We will expect data to be gathered with reasonable efficiency and team organization; accurate, legible and neat according to desired formats, and kept in good order. Conduct on the site is also important (*e.g.*, minimizing disturbance to soil vegetation, keeping equipment in good order). Your progress in data inputting and eventual checking of the quality of field data will also be included in this assessment. We also encourage curiosity and good observations: appreciation will be shown for such additional contributions. Naturally, we will make allowance for your need to learn through experience and there will not be unreasonable expectations. Be conscientious and try your best.

Don't be afraid to ask questions. We encourage them. If unsure or confused – ask! Don't be shy: our paramount rule as instructors is that students must always be treated with respect and every question is welcomed without judgment. If you notice something interesting or curious, think about it and mention it to the instructors or your colleagues. Such observations can prove valuable. If you have an idea for improving field work procedures or operations – propose it. Also, take notes and write comments on the data sheets.

3. Individual essay, report, or project (30%). Write a statement, report, or reflective piece on one of the topics provided, or an idea of your own. Approximate length is about 2000 – 2500 words. The due date is October 16, 2012. There may be opportunities to complete a small monitoring exercise related to the work done in the course. If you have a good idea of your own that you wish to use, please confer. If you are stuck for an idea, please consult Ken or one of the NEC instructors. Use your course notes, bibliography, library resources, scientific journals, Web sites, interviews with experts or practitioners, or your own experience. Make sure to acknowledge your sources of information and assistance; usual UW policy applies.

4.

Agreement on Conduct.

Faculty of Environment field trip guidelines apply. You must sign the agreement before departure. Documents follow this outline.

Course Fee

The cost is \$250 to defray camping fees, most of your food costs, transportation, entry fees, and course materials. Cheques payable to the University of Waterloo with your student number on the back and completed course fee form should be given to Patti Bester at the latest at the on August 20th introductory course meeting (do not go to the UW cashier).

Preparing for the Course

The campground is quite dark at night; bring a flashlight.

You will need to bring your own bedding, air mattress, and other for your personal needs items. Warm clothing, and good boots (waterproof, good ankle support), rainwear (preferably hat, coat, and pants), bug repellent and sunscreen are very important. Bring a small backpack and water bottle for our daily field excursions and Tupperware/reusable containers to pack your field lunch. There will be opportunities for swimming, so include swimwear. Usually the weather has been good at this location in August, but it can be unpredictable and you should be prepared for adverse conditions. Please be economical with your baggage because space is limited in the vans. If you have any questions, concerns, or needs, please contact Ken (koakes@uwaterloo.ca) or (519) 595-3430.

We will rent vans. The minimum age for drivers is 21. There will be three vans and we will need a roster of three volunteer drivers (Ken will also be a driver). The traveling distance from Waterloo to Hockley Valley Provincial Nature Reserve is about 85 km. Please let Ken know if you would like to be a driver.

You are encouraged to bring “extras” to enhance the course: Frisbees and other toys or games, musical instruments etc. Your course fee will provide for about 70% of your food. We will have breakfast in camp and make our own individual lunches from camp provisions, and prepare 5 or 6 of our evening meals as a group. There will also be ample food for snacking. You are welcome to bring anything special for yourself. The two or three evening meals eaten out will be at your own expense – we will try to keep costs reasonable.

We will maintain a tasty menu and attempt to keep you happy and well fed. Please let Ken know about any special food preferences (*e.g.*, vegetarian, vegan, Kosher, Halal, diabetic) and food allergies, particularly if they are serious such as peanut allergy. We will try to accommodate you as best as possible. It is best to discuss any special preferences or needs with Ken ahead of time. If your case is really unusual and difficult to accommodate you may be asked to bring special provisions for yourself (for which you will be reimbursed) to complement what you can eat from the group menu.

Please make sure that you have all your needed prescriptions or medical support with you. Ken will carry a basic first aid kit. Please inform Ken of any special health or medical conditions that he should know about as manager of the course (*e.g.*, chronic fatigue, migraines, acute phobias, anaphylactic reactions, dangerous allergies etc). All such information will be kept strictly confidential.

If you haven't camped before or spent much time in the field, and aren't feeling sure of things, don't hesitate to ask Ken or a friend who knows about such things. There is a first time for all of us. It is best to plan well ahead rather than try to second-guess what you will need. Please feel free to contact Ken by phone or email.

For camping we use a combination of tents brought by course members and a few that we have in the course supplies. Please let Ken know if you will be able to bring a tent and how many it can accommodate. As you will need space for baggage, a tent listed as "four person" will really only sleep two (and your gear) comfortably! Also let Ken know if you plan on sharing a tent with specific course participants.

Last minute problems and emergencies

Please contact Ken at home (519)595-3430. Make sure that you fully inform your family or special friends about how to contact you, and that you provide an emergency contact on the field trip form that is in your course package.

Some Useful Web Sites

Look these over – and then do some browsing to find other interesting examples of ecological and environmental monitoring, whether government, corporate, scientific, activist, or individual. Environmental monitoring in the broadest sense means monitoring anything to do with the environment, but lately it usually refers to monitoring physical parameters such as pollutants. Monitoring of vegetation, fauna, ecological function, and species richness is now often called ecological monitoring.

-Ecological Monitoring and Assessment Network.

<http://www.ec.gc.ca/faunescience-wildlifescience/default.asp?lang=En&n=B0D89DF1-1>

EMAN coordinates and guides ecological monitoring in Canada, particularly monitoring that uses SI/MAB plots as our course does. Get to know what EMAN does and the various people and organizations involved, current activities, news about various programs and events. In our course we use the forest biodiversity monitoring protocol. Take a look at the Terrestrial Vegetation Monitoring Protocols. Also take a look at the other kinds of protocols, whether aquatic or birds, and see how the principles of monitoring are applied in such contexts.

-Niagara Escarpment Commission<http://www.escarpment.org/home/index.php>

Familiarize yourself with the mandate (i.e. Niagara Escarpment Planning & Development Act and the Niagara Escarpment Plan) and activities of the NEC, and especially the section on Monitoring (the ONE monitoring program) found under the “Education” menu at the top of the web page. Our course should be mentioned there. The NEC holds a biennial conference (the Leading Edge) on all the scientific research occurring on the escarpment. You might be interested in browsing the abstracts (summaries) from the papers presented to familiarize yourself with the wealth of activities and the issues and concerns about the escarpment.

-Coalition on the Niagara Escarpment. <http://www.niagaraescarpment.org>

This is the main citizens group active in protecting the escarpment. Get to know its campaigns and concerns about some of the threats to the escarpment.

-UNESCO – World Biosphere Reserves.

One of the main activities of UNESCO is promoting and coordinating scientific activities at the world level. For instance, the UN has provided the lead in conducting research on climate warming and issuing the most important reports to guide the formulation of vital cooperative

agreements such as the Kyoto Accord on climate change. The World Biosphere Reserve program is also one of its initiatives. Look for Ecological Sciences UNESCO/Science Biosphere reserves to learn about the history and current activities of this vital program. If you go to www.unesco.org/mabdb/bios1-2.htm you will find the UNESCO MAB Biosphere Reserve Directory interactive map that lets you visit all the biosphere reserves in the world. Check out the Ontario reserves as well as the more exotic ones world-wide. Also, check out this document produced by UNESCO which includes the history behind the development of the Smithsonian Institute forest biodiversity monitoring protocol:

unesdoc.unesco.org/images/0009/000938/093876eo.pdf

-Canadian Biosphere Reserves Association. <http://biospherecanada.ca/> Visit the other superb natural areas in Canada that have been designated as world biosphere reserves.

-Citizens Environment Watch (rebranded to “EcoSpark”). <http://www.ecospark.ca> and activist groups of all description are now using monitoring as a tool in a wide variety of ways. Here’s a good place to see what is happening out there.

-Monitoring the Moraine www.monitoringthemoraine.ca This site discusses the monitoring plans now being organized by the very effective citizens group STORM (Save the Oak Ridges Moraine) in collaboration with EcoSpark as part of its activities to make sure that the recent agreement of protect the moraine is adhered to.

-Natural capital And finally, a couple good reports on the concept of “natural capital” – all the good things provided by natural areas for the planet as well as human society. Philosophically, we do monitoring to help maintain natural capital, whatever the case. Ducks Unlimited, a long established conservation organization originally financed by very rich US duck and goose hunters what has established or rehabilitated many prime wetland areas across North America, has produced a fine document “The Value of Natural Capital in Settled Areas of Canada” which can be found at <http://www.ducks.ca/aboutduc/news/archives/pdf/ncapsum.pdf>

The David Suzuki Foundation also produced an interesting document (2008) entitled, “Ontario’s wealth, Canada’s future – Appreciating the Value of the Greenbelt’s Eco-services”. The value of the Greenbelt's non-market ecosystems services was estimated to be \$2.6 billion per year (approx. \$3500 per hectare). This is a conservative estimate due to an incomplete understanding of *all* benefits provided by nature, intrinsic values and the fact that nature itself is irreplaceable.

The Greenbelt's wetlands and forests hold the greatest value, with a combined value of over \$2.3 billion. Overall, the highest total values of natural capital within the study area were found along the Niagara Escarpment in the Bruce Peninsula.

<http://www.davidsuzuki.org/publications/downloads/2008/DSF-Greenbelt-web.pdf>

Mandatory Statements Regarding Your Rights

Academic Integrity: To create and promote a culture of academic integrity, the behaviour of all members of the University of Waterloo is based on honesty, trust, fairness, respect and responsibility.

Grievance: A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. Read Policy 70 - Student Petitions and Grievances, Section 4,
<http://www.adm.uwaterloo.ca/infosec/policies/policy70.html>

Discipline: A student is expected to know what constitutes academic integrity, to avoid committing academic offences, and to take responsibility for his/her actions. A student who is unsure whether an action constitutes an offence, or who needs help in learning how to avoid offences (e.g., plagiarism, cheating) or about “rules” for group work/collaboration should seek guidance from the course professor, academic advisor, or the Undergraduate Associate Dean. When misconduct has been found to have occurred, disciplinary penalties will be imposed under Policy 71 – Student Discipline. For information on categories of offences and types of penalties, students should refer to Policy 71 - Student Discipline, <http://www.adm.uwaterloo.ca/infosec/Policies/policy71.html>

Appeals: A student may appeal the finding and/or penalty in a decision made under Policy 70 - Student Petitions and Grievances (other than regarding a petition) or Policy 71 - Student Discipline if a ground for an appeal can be established. Read Policy 72 - Student Appeals,
<http://www.adm.uwaterloo.ca/infosec/Policies/policy72.html>

FACULTY OF ENVIRONMENT

Guideline #15 Field Trip Guidelines

Introduction

Course field trips are educational endeavors and it is important that there is openness, fairness and consultation in all aspects of a field trip. Leaders should prepare themselves to be able to make appropriate decisions when there is risk and uncertainty, particularly in remote situations. Students should be given appropriate advice and should also be given reasons why certain rules are to be followed.

Pre-trip socializing and briefing sessions are important so that everyone is aware of what is being planned. This gives students a chance to share their thoughts and ideas about the field trip, to make suggestions or request specific activities, to identify any concerns that they may have, and to meet other participants.

Participants should be encouraged to communicate their concerns, and be confident that they have the right to voice their concerns or opinions during the trip; appropriate means for communication should be negotiated. It is often useful to have the group meet periodically during the trip to discuss their feelings or concerns.

Participants should realize that individuals and their interests differ; not everyone will conform or prefer to socialize in the same way, and there are times when someone would rather be alone. There will also be times when irritations develop and they should be discussed. On the other hand, it is also sometimes easier not to get bothered by small events: tolerance can be helpful. The guiding rule should be that no one will be pressured to do something undesired and the option of opting out on non-course activities must be respected. Leaders and participants must recognize and respect the interests and feelings of the group, and not become selfish in promoting their own agendas or preferences. Local customs, traditions, and beliefs, particularly in cross-cultural situations, must be respected and leaders should be very careful to instruct students about them. The importance of this should not be underestimated: a single thoughtless or even unintentional action can become unpleasant for the whole group. Conforming to local customs, particularly those that do not correspond to one's own experience (e.g., specific dress codes or differences in permitted activities for women and men), can be frustrating and difficult but may have to be endured. The best rule is to observe closely, ask questions or permission, and be willing to apologize.

Participants must recognize that leaders can experience stress and that they require some time off within the schedule of lengthy trips.

Guidelines for all Participants

Preparation:

1. Information should be distributed to participants well in advance of the field trip. It should include the objectives of the trip, special clothing or equipment needs, proposed working groups, and any other organizational matters. This will provide an opportunity for

participants to provide suggestions/input, which can be considered and, if appropriate, be acted upon prior to the trip.

2. If a course involves field trips, the locations, timing, duration and cost of such trips should be explicitly stated in the course outline.

3. Short field trips will usually be planned by the instructor or leader (as opposed to the participants), especially if they are routine components of a course. Any additional unscheduled field events will be optional and should be planned in consultation with participants.

4. On an overnight or longer field trip, emergency contacts should be established. In particular, a list of field-trip destinations, and hotel addresses and phone numbers should be provided to unit offices and to all participants so that their relatives can be informed of the proposed itinerary. Participants should provide the leaders with the name, address and phone number of a person to be contacted in case of illness or other emergency. The names of field-trip participants should be filed in the unit office. *The UW Field Trip Guidelines require a first aid kit to be carried and that one of the participants have a First Aid Certificate if the group is larger than 5 people.*

5. The University of Waterloo will not tolerate sexual harassment or any form of discrimination covered under the Ontario Human Rights Code. Participants should be aware that disciplinary action may be taken within the University and/or charges laid under the Human Rights Code against individuals who are found guilty of such offences. Full details of University policy are available in University of Waterloo Policy #33, Ethical Behavior.

6. Persons (whether faculty, staff or students) against whom there have been substantiated complaints of sexual harassment or inappropriate or dangerous behavior, may be excluded from participation in field trips. The Head of the unit will decide on the suitability of field-trip leaders. Leaders can exclude or limit the activities of participants, after consulting with appropriate University officials, but should provide explanations to the applicants/participants.

7. It is recommended that all field-trip participants inform the trip leaders in advance of any physical, psychological (e.g., extreme fears), medical, dietary or addiction-related problems and any cultural or religious restrictions that may affect their participation in field activities, and/or their ability to endure the demands of the field trip. Reasonable efforts will be made by the trip leaders, after consultation with any concerned participants and with University counseling services, to ensure if reasonably possible that such special needs can be met.

In the Field

8. Each evening, activities planned for the following day should be discussed. Additional unscheduled events should be optional and planned in consultation with participants.

9. The University indemnifies (protection or security against damage or loss) all persons employed by the University against any action brought against them, which arises out of the scope and course of his/her duties/responsibilities as an employee of the University of Waterloo.

10. Whenever possible field-trip participants should not work alone, but with other group members, for safety reasons.

11. In the field, participants should identify themselves to local people and explain their relationship to the University of Waterloo in accordance with the standard guidelines of the Office of Research. When conducting research interviews, field-trip leaders should be aware of the University guidelines, which are available from the Office of Research. Students should use their discretion when giving their names and contact information to those whom they meet socially on trips.

12. All field-trip participants can exercise their right to "opt out" of an activity which causes anxiety, or that is contrary to their better judgment or cultural norms, but can at the same time participate in the field trip. Such a request to opt out of an activity should be accommodated, if appropriate.

13. If a field trip participant infringes on the work of others (e.g., harassment, intimidation, threats), the leaders retain the right to send a field trip participant home at the individual's expense, as such infringements are included as academic offences (UW Policy 71). It is the responsibility of the trip leader to notify the student's contact person and the unit head, so that suitable arrangements can be made for returning the student to the University of Waterloo. The participant who is required to withdraw will forfeit credit for the field trip/course.

Guidelines Primarily for Trip Leaders

1. Field trips for which course credits are given should be explicitly described with respect to timing, duration, itinerary, cost, objectives and expectations in the initial course outline.

2. All field trips that include overnight stays will normally have two leaders, at least one being a faculty or staff member. Whenever possible, there should be at least one male and one female leader. This provides students with a choice of individuals to consult and an alternate to lead the group if one person becomes incapacitated.

3. Field-trip leaders should at all times demonstrate responsible leadership. They should inform students about any legal situations (e.g., trespass regulations), safety problems or cultural restrictions that may be encountered during the field trip. They should limit any activity that may injure or endanger field-trip participants.

4. Field-trip leaders should try to be sensitive to any different points of view that may arise between individuals or within groups and should attempt to mediate a solution. Leaders must be particularly aware of their responsibility to prevent harassment in all its forms.

5. Staff field trip leaders will be eligible for recompense according to UW Policy 16. Leaders' normal travel expenses may be covered, but there will be no other compensation.

Guidelines Primarily for Participants

1. Participants should be aware that they are responsible for their own actions at all times.

2. The university does not provide insurance coverage for field-trip participants. Thus, individuals should make their own arrangements for baggage insurance and adequate medical coverage, especially on trips outside Canada.

3. Organizing and running a field trip is not an easy task; there are many details to be considered. Participants should follow the instructions of trip leaders and assist with organizational activities, when appropriate.

General Field Trip Guidelines

1. Field trip plans must be approved and signed by the Unit Heads or Associate Deans.
2. Participants must sign a Letter of Understanding.

May 8, 1995
Office of the Dean

Revised April 19, 2004

Safety Guidelines for Field Work/Field Trips In Canada

Field work and field trips* are an important component of teaching, research and the educational process and are supported and encouraged by the University. Field work activities can present unique risks and hazards to supervisors, researchers, faculty, students, staff and the University and appropriate risk management measures must be in place in order to ensure the safety of all field work participants.

Please familiarize yourself with the entire guideline located on the Safety Office Website http://www.safetyoffice.uwaterloo.ca/hspm/fieldwork/field_work_guidelines_canada.htm

FACULTY OF ENVIRONMENT

LETTER OF UNDERSTANDING

(WHEN COMPLETE, RETURN TO YOUR COURSE INSTRUCTOR)

RE: FIELD TRIP(S) FOR COURSE NO. AND TERM:

DESTINATION:

DEPARTURE LOCATION:

TIME OF DEPARTURE/DURATION:

I, _____, have read the Field Trip Guidelines and the General Field Trip Guidelines of the Faculty of Environment.

I understand that the field trips are University activities, and that I am to follow all regulations that define acceptable conduct on campus.

Name: _____ ID# _____

SIGNATURE: _____ DATE: _____

Medical Information:

Allergies/Health Issues:

Medications:

OHIP #:

Medical Coverage Company and Policy # and Telephone Contact:

EMERGENCY CONTACT:

Name: _____ Relationship: _____

Address: _____

Phone: _____

I. Scope of the Brief

This brief presents the findings of an exploratory web-based research that was undertaken to get a preliminary understanding of the spectrum of student entrepreneurship programs and opportunities available across major Canadian universities, particularly peer institutions that University of Alberta often benchmarks itself against. To this end, the information captured in the brief originates from examining selected well-established student entrepreneurship programs available at peer institutions. The following discussion highlights a range of related issues including a list of pre-requisites common to the established programs, key stakeholders important to create solid student entrepreneurship ventures, information about nature of programs and events at those programs (including recent efforts at University of Alberta), a brief note on fostering social and non-profit entrepreneurship opportunities, as well as available resources in Edmonton to encourage and support a spirit of entrepreneurship among University of Alberta students.

II. Overview

A large number of Canadian universities already offer a variety of programs to support student entrepreneurs. It is worth noting that there has been a boom in these programs in the last 5 years. An article in the National Post from September 2013 also notes that Canada might be one of the best places in the world for launching startups. In particular, Vancouver, Toronto and Waterloo were ranked as some of the best startup regions in the world.² The ranking measured the success of the startups that originated from these cities, as well as the infrastructure, funding and overall support available to the startups. Although the article does not directly speak to the relationship between Universities and their startup programs, there is undoubtedly a connection between the strengths of the program found at University of British Columbia (UBC), University of Toronto (U of T) and University of Waterloo with the successes of startups in those regions. It is important to note that these startups are focused heavily on the technology industry and is oftentimes exclusive to tech startups. While opportunities for social entrepreneurship exist, there are fewer start-ups building on socially innovative ideas; additionally, the support available for social entrepreneurship is fairly limited in scale and scope, however, the trend in Canada seems to be towards increased support for social entrepreneurship. While not a focus of this study, there are a number of government bodies across Canada that support a wider range of small businesses and entrepreneurs which may also be worth exploring to source financial resources and other support for student led ventures.

² Tony Wanless, "Why Canada is becoming the place to launch a tech startup," *Financial Post*, September 22, 2013, http://business.financialpost.com/2013/09/22/why-canada-is-becoming-the-place-to-launch-a-tech-startup/?__lsa=1c57-0b4d

III. Range of Factors Essential for Creation of Student Entrepreneurship Programs

Based on preliminary web-based research conducted among student entrepreneurship programs available at other Canadian university campuses, a range of factors need to be in place to encourage students to undertake entrepreneurial ventures. The most frequently mentioned ones are:

- Financial Investment from a wide range of sources (university, industry, and alumni)
- A focus on team-based talents (rather than individual talent)
- Involvement of alumni (of the university and of the program)
- Involvement of mentors (established experts from industry/business and other entrepreneurs)
- Physical space for the program
- Ties to the School of Business at the specific university
- A competitive environment that facilitates and provides opportunities for start-up pitches
- Presence of for-profit initiatives and entities who may take a share of the start-up but provide additional legal support in exchange.

IV. Stakeholders

Based on the research conducted, five key stakeholders and their contributions to the programs are noted below:

Government

Many of the programs benefit from strong financial support at both the municipal and provincial levels. The governments also have the capacity to bring in outside talent into the region by adopting talent seeking programs or providing additional funds to companies that hire talent from outside the province. Governments also provide physical spaces needed for companies to carry out their businesses and can support research and development by providing special funds to companies.

Industry/Businesses

This stakeholder is probably the most important contributor to the success of entrepreneurial programs. Not only do businesses provide a substantial amount of funding, experts in the industry, other entrepreneurs are key in mentoring new startups. They also are the most qualified to adjudicate business competitions and provide constructive criticism to improve new companies.

Post-secondary Educational Institutions

The universities also have an enormous capacity to support entrepreneurship. The research done at universities and colleges often require immense support to bring the idea to market and universities already have mechanisms in place to facilitate this process. They already possess a large network of alumni, connections to the industry and facilities, which are necessary for new companies to grow. Not to mention, academic staff at universities perhaps play an important role in advising, mentoring and connecting students to requisite resources and opportunities as the first point of contact (especially since they work most closely with students and may be the first

point of contact students approach). Further, many universities are beginning to start student focused entrepreneurship programs in collaboration with student associations as well.

Students Associations / Unions

The role of the student associations in supporting these startup programs varies greatly from program to program. For the most part student associations have had a limited role with the exception of Western University's program. More recently, McMaster University Students' Union has also provided funding support to similar initiatives. The student associations can provide both funding and space needed for students but their strength comes from their ability to network current students and alumni and create mentorship opportunities. Student Associations can also play an important role as single touch point source of necessary information through their outreach divisions and services.

The table below attempts to summarize the possible contributions that the various stakeholders can make to an entrepreneurship program.

	Financial Support	Mentorship & Learning	Research & Development	Business Competition & Pitches	Physical Space & Business Services
Government	x		x		x
Industry/Business	x	X	x	x	x
University	x	x	x		x
Student Associations / Unions	x	X			x

Table 1: Key stakeholders and possible areas of contribution

V. Student Entrepreneurship Programs at selected Canadian Universities

Velocity (University of Waterloo)

The university and the city are quite famous for having a strong technology sector with hundreds of high-tech firms BlackBerry/RIM was founded in Waterloo and relied on a steady stream of talented University of Waterloo engineers. There is certainly a culture of entrepreneurship that surrounds the city and the university, which led to the beginnings of VeloCity³ in 2009. Since then various start-ups of VeloCity have become full-fledged companies and have raised over \$100 million dollars in venture capital (Kik messenger, Pebble, Thalmic Labs are notable examples)⁴. If the outcome of these programs is measured solely by the size/value of the start-ups it produces, VeloCity has a distinct edge over other programs.

³ Velocity, *About Velocity*, <http://velocity.uwaterloo.ca/about-velocity/>

⁴ The Globe and Mail, "Waterloo startup program raises over \$100 million", *The Globe and Mail*, January 30, 2014, <http://www.theglobeandmail.com/report-on-business/small-business/sb-tools/small-business-briefing/waterloo-startup-program-hits-100-million-milestone/article16604251/>

Velocity has four interlinked initiatives

1. Velocity Residence – A residence space with 4 month residence contracts (students may reapply for subsequent terms). The space is designed to give students access to many resources including other students, latest technologies, venture capitalists, professors, and current entrepreneurs. There is an intensive week of Velocity Bootcamp, which helps students learn to network, build business models, and get started building their business. There are also weekly dinner guest speakers who have experience with entrepreneurship.
2. Velocity Garage – A space that is offered free to Waterloo students and alumni who need space and mentoring to kick start their companies. The company must make <\$250 000.
3. Velocity Alpha – Open to all Waterloo students, consists of weekly workshops, panelist discussions and networking events. Designed to provide all students with basic tools and real world skills needed to grow their ideas
4. Velocity Fund Finals – A competition where startup ideas and business models are pitched for a prize of \$25000 for early stage tech startups (4 available per year) and \$1000 to Waterloo students (3 prizes available per year).

Note – Velocity does not take a business share or lay claims to any of the ideas it supports

Entrepreneurship UBC⁵ (University of British Columbia)

1. Accelerator program – real-world, hands-on learning to accelerate new venture creation
2. Courses – for-credit entrepreneurship courses available to all students
3. e@UBC Online – online platform for self-directed learning and new venture development
4. e@UBC Mentor Network – access to experienced, world-class business leaders
5. e@UBC Incubator – open concept office space and resources
6. e@UBC Student network – student led initiatives that build the entrepreneurial community at UBC

Venture Connection (Simon Fraser University)⁶

Venture Connection falls within the umbrella of the SFU Innovation Office (formerly known as UILO). The Innovation Office is responsible for creating new university-industry research and development partnerships and to commercialize the results of University-based research.

Venture Connection has seven programs listed on its website.

1. Early Stage Incubator – Provides students and recent alumni with business development services
2. Mentor Meet – Drop-in sessions for students to discuss business ideas with an experienced entrepreneur and to explore Venture Connection's programs
3. Venture Co-op – Independent co-op terms to work on a new venture or to develop an existing business plan (undergraduates only)
4. Coast Capital Savings Speaker Series – Invites founders of leading Vancouver startups to share their stories
5. Competitions – Coast Capital Savings Venture Prize is for clients participating in the early stage incubator program. Teams compete for a \$5000 cash prize. Judged by panel of industry

⁵ University of British Columbia, *Entrepreneurship@UBC*, <http://entrepreneurship.ubc.ca/about/>

⁶ Simon Fraser University, *Venture Connection*, <http://www.sfu.ca/io/venture/venture-connection.html>

experts. SFU's Next Top Product gives students from all faculties the chance to become featured suppliers to the SFU bookstore. Their product will be purchased by the SFU bookstore and its three campus locations

6. Ignition Workshop Series – A 10 part workshop series directed at founders/senior team members of startups/companies

7. Venture Internship – MBA internship semester to develop a new venture or to develop an existing business plan (MBA only)

The Next 36 (University of Toronto)

The program selects 36 undergraduates from Canadian institutions (from a pool of ~1000 applicants). The students are divided into nine teams of four, and each team receives \$50000 plus guidance/mentorship from industry leaders. The students will take residence in Massey College for four months in the summer and interact faculty and prominent Canadian entrepreneurs.

Funding for this program is provided by various Canadian business leaders and these business leaders might collect a share of or first access to successful business ideas/startups.

Notable Example: Kira Talent⁷ – A digital platform designed to help employers screen through potential candidates through a recorded video interview. Has raised over \$2 million dollars of funding.

Digital Media Zone (Ryerson University)⁸

DMZ Model is composed of four components

1. Educate – Digital Specialization program allows students to acquire digital skills and receive academic credit

2. Ideate – No support, teams must come up with a business idea

3. DMZ Incubation Program - A semi-structured 4-month program (with optional 8 month addition) that includes mentoring and stress-testing the business idea. Startups will validate their business model, work on R&D, creating prototypes, seeking out pilot customers and isolating a market for their product

4. DMZ Acceleration Program - Successful businesses in the DMZ incubation program may be selected to participate in the DMZ acceleration program. The goal is to assist the startup by designing and executing a business plan. The program consists of a 3 phase structured program ranging from 6 to 18 months. This includes: 4 months of intense process observation, education, networking, development and finessing

- 8 to 12 month rapid growth phase (fees may apply)
- Equity funding available for each company selected to participate in the acceleration program
- Specialized events attract key industry partners
- Introductions to a network of successful entrepreneurs advise you on the development of your business

⁷ Armina Ligaya, "How Kira Talent went from a classroom to a fast growing venue," *Financial Post*, November 25, 2013, http://business.financialpost.com/2013/11/25/how-kira-talent-went-from-a-classroom-to-a-fast-growing-venture/?_lsa=1c57-0b4d

⁸ Ryerson University, *Digital Media Zone*, <http://digitalmediazone.ryerson.ca/>

Notable Example: Soapbox⁹ - A digital platform designed to receive user feedback on a service and to relay this information to the service provider. The traditional ‘comment box’ transformed into a digital program capable of handling large quantities of comments and with additional features such as ranking of comments. Soapbox was the brainchild of a Ryerson SU executive and the first idea to be developed through the DMZ.

Other Brief Examples

Carleton University’s Nicol Entrepreneur Institute

From two \$1 million gifts from Carlton graduate Wes Nicol, an overseas paid internship program was developed to help support the “next generation of entrepreneurs.” Carleton undergrad and graduate students from all faculties are eligible to apply.

McMaster University’s Don Pether Incubation Centre & McMaster Students’ Union Fund

Created from the \$1 million donation made to the engineering faculty by the former president of Dofasco Inc., this fund provides startup support for tech businesses by students and recent grads.

VI. Role of Student Associations in Promoting Entrepreneurship Programs / Opportunities

The above university related initiatives have met with success due to the outstanding work of the students who have participated in their programs. However, when looking at the history of these programs, there is minimal indication that the university’s respective student association had a key role in the initial development or continued support of these programs. The large amount of funding needed to start these programs (usually in the millions of dollars) have come either from the university or from a donor, while the business expertise have come either from the faculty of the university, alumni of the university or from local/regional businesses.

Even in the case of Ryerson’s DMZ the students’ union’s involvement is passive at best. The program came to fruition because of one student executive’s desire to bring Soapbox to the university. At the time Ryerson was working on bringing entrepreneurship opportunities to its students and one of the elected student executive was able to work with the university (out of individual interest) to bring both the DMZ and Soapbox to Ryerson.

The exceptions:

Western University’s BizInc – Student Entrepreneur Incubator¹⁰

Of all the programs surveyed only Western University’s BizInc had its roots tied directly to an undergraduate student association. In 2010 the Western University Students’ Council (USC) adopted a proposal to create a student business incubator. The USC not only provided operating funds but helped advertise the program and to bring in student interest. The London Economic Development Corporation was and is a key contributor of the business resources necessary to support the program. This was then followed by funding from the University, and finally by the Ministry of Economic Development and Innovation. A detailed history of events are provided on BizInc’s website.

⁹ Soapbox, *Soapbox*, <http://soapboxhq.com/>

¹⁰ BizInc, *The Student Business Incubator*, <http://bizinc.ca/about/history>

This program's history is unique amongst those surveyed. Not only was it driven by the USC, it continues to receive support and guidance from the USC as well. However, it is important to note that in order for the program to be sustainable the USC must reach out to already established business bodies and must find large financial support either from the university or from the government. Without these things the program would not be able to support the expansion and growth needed to support a dozen or so student entrepreneurship projects.

McMaster University Students' Union Fund

Recently the MSU and Student Affairs approved \$100 000 of funding for a new student entrepreneurship program. The funding will help hire staff for the student affairs department who will be responsible for creating new programming, workshops and providing services to help students create new start-ups. Some of the money will also be set aside as seed money for new start-ups. This was made possible through the MSU-McMaster student life enhancement fund, a fund designed to support initiatives that benefit student life on campus.

VII. Edmonton-based Resources & Services for Startup Initiatives

The research undertaken for this brief clearly indicated the role local resources and services played in promoting opportunities for student entrepreneurship. Hence, a list of resources and services available in Edmonton was compiled to provide a sense of direction for seeking further information. This list is not exclusive by any means.

Entrepreneurship @ UAlberta¹¹

Entrepreneurship @ UAlberta is a joint initiative of the School of Business and Technology Commercialization Centre at University of Alberta. It is a kind of umbrella initiative that characterizes itself as the "ecosystem of entrepreneurship and innovation at University of Alberta" that houses information on resources, opportunities, networking and mentorship for potential student entrepreneurs (from any faculty) on the university campus.

Venture Mentoring (University of Alberta)¹²

The University of Alberta Venture Mentoring Service, launched first in Fall 2013, is modeled on the well-established entrepreneurship program at Massachusetts Institute of Technology. However, services of this initiative are available to both U of A students and alumni, interested in for-profit as well as not-for-profit startups. The service functions by connecting former alumni with business development experience and a passion for mentorship with the potential entrepreneur. The mentor works in a volunteer capacity.

eHUB¹³ (University of Alberta)

eHUB is a networking group created by the entrepreneurial community of Alberta. It was launched recent, in Spring 2014. Set up at HUB Mall on University of Alberta campus, it provides physical space to interested entrepreneurs interested in sharing and discussing innovative ideas.

¹¹ Entrepreneurship @UAlberta, *About Us*, <http://entrepreneurship.ualberta.ca/about-us>

¹² Venture Mentoring, *About Us UAlberta Venture Mentoring Service*, <http://alumni.ualberta.ca/volunteer/venture-mentoring-service/about>

¹³ Entrepreneurship @ UAlberta, *About eHub*, <http://entrepreneurship.ualberta.ca/ehub/what-is-ehub>

Alberta Innovates

Alberta Innovates offers a wide range of resources and services offered through various program areas. Its program goal is to bring together the government, academia and business to help bring innovative ideas into the market. It offers technical services such as:

- Advisory services
- Industrial research
- Technology assessment, development and demonstration
- Testing and analysis

The services are offered through four divisions, the petroleum division, the environment and carbon management division, the bio and industrial technologies division and the health division. Each of these divisions includes a number of different programs.

Alberta Innovates also provides funding to academic graduate students and to industry/companies including a \$15 000 to \$50 000 Alberta Innovation voucher for small companies looking to expand.

Alberta Innovates also promotes collaboration through various outlets including:

- Alberta Biomaterials Development Centre
- Centre for Research & Commercialization
- nanoAlberta
- Alberta Regional Innovation Network System

Edmonton Economic Development Corporation (EEDC)¹⁴

A not-for profit company owned by the City of Edmonton responsible for providing leadership to the economic growth strategy of Edmonton. Now labelled as Edmonton Economic Development¹⁵, and their mission is “to inspire a culture of entrepreneurship, innovation and competitiveness that forever differentiates our city”.

Enterprise Edmonton¹⁶

A business support program that is a part of the EEDC

TEC Edmonton¹⁷

This is a joint venture between business leaders and the University of Alberta. TEC Edmonton focuses on bringing the science and research of the university to market. TEC Edmonton offers 3 major services: business development, technology management and entrepreneur development.

Make Something Edmonton¹⁸

Make Something Edmonton was formed by members of a volunteer task force of Edmontonians who came together, at the request of Mayor Stephen Mandel in 2012, to identify and inspire

¹⁴ Edmonton Economic Development Corporation, *Edmonton Economic Development Corporation*, <http://www.edmonton.com/>

¹⁵ Edmonton Economic Development Corporation, *About Edmonton Economic Development*, <http://igniteedmonton.com/about/>

¹⁶ Edmonton Economic Development Corporation, *Enterprise Edmonton*, <http://enterprisedmonton.com/>

¹⁷ TEC Edmonton, *TEC Edmonton*, <http://www.tecedmonton.com/>

¹⁸ Make Something Edmonton, *About Make Something Edmonton*, <http://www.makesomethingedmonton.ca/about/>

solutions to Edmonton's image and reputation challenges, Since then, it has become a platform that hosts a variety of stories including ideas for community projects and business startups. It is considered to provide a supportive environment for sharing and exchange of new ideas as well as a platform to network.

Startup Edmonton¹⁹

A for-profit company dedicated to providing space and business resources to start-ups. Their membership and space can be accessed for a fee. There are three levels of membership available.

- Club – At the club level, members get 9-5 access into the building for up to 4 days per month. This allows members to attend workshops and interact with members of the Startup Edmonton community.
- Shared – You get all the perks of the club membership, plus 24/7 keycard access to the space, shared workspace, meeting rooms, business services, lockers, mailbox and mailing address. The membership is designed for members looking to access basic business services and looking for a place to work/meet with other people.
- Resident – This level is intended for new and/or growing startup teams. They get all the perks of the previous two levels, plus a permanent desk in the Edmonton Startup campus, priority access to meeting rooms, and access to the use of program rooms. This requires a 6-month contract with Startup Edmonton.

Flightpath Accelerator²⁰

A for-profit startup accelerate program that invests in early-stage, tech-based startups. It provides:

- Seed funding (\$15 000 cash investment) in return for 6% of the common/founder stock
- Access to a team of mentors (experience entrepreneurs and investors)
- Office space at Startup Edmonton with the perks of a resident (see above for perks)
- Weekly pitch sessions
- Exposure to local and international promotions and investments
- Access to legal and financial support

Edmonton Research Park²¹ (ERP)

Established in 1980, the ERP offers companies a variety of facilities and services needed to support a company's development. The ERP operates buildings on site designed to help support research initiatives. There is land available for companies to build their own research facilities and a 243-acre campus for those looking to lease space.

MaRS Centre for Impact Investing – Funding Sources²²

Unique tool designed to find impact-oriented financial funding in Canada. Various funding sources can be located based on the region, the funding amount, and the target client. The engine is designed to help non-profit organizations find funding for new initiatives and projects with a social impact.

¹⁹ Startup Edmonton, *Startup Edmonton*, <http://startapedmonton.com/>

²⁰ Flight Ventures Inc., *Flightpath Accelerator*, <http://www.goflightpath.com/accelerator/>

²¹ Edmonton Economic Development Corporation, *Edmonton Research Park*, <http://www.edmonton.com/edmonton-research-park/default.aspx>

²² MaRS, *Funding Sources*, <http://impactinvesting.marsdd.com/knowledge-hub/funds/>

VIII. Resources for Social Entrepreneurship

Social entrepreneurship is a much smaller field than the for-profit sector and the resources available to kick-start or accelerate non-profit programs are not readily available. There are however a number of organizations in Alberta that exist to support non-profits with financial and technical assistance. These are discussed below.

enp Canada²³

Enterprising Non-Profits (enp) was first established in British Columbia in 1997 and various branches exist all across Canada including one in Alberta. enp exists to promote and support social enterprise development. enp-Alberta offers three events related to social enterprise/entrepreneurship throughout the year. enp also provides matching grants and technical assistance to non-profit organizations. enp-Alberta is supported by Trico Charitable Foundation and Capital One as well as the Government of Canada.

Social Enterprise Fund²⁴

The SEF is a 10.5 million dollar endowment fund that is designed to provide financing and technical assistance to social enterprises and affordable housing projects. It is a joint initiative between the Edmonton Community Foundation, the City of Edmonton, and the United Way of Alberta. SEF gives long-term loans with low interest rates to social enterprises. Each loan is designed to suit the needs of the applicant and there are no available details on loan amounts and repayment schedules.

Trico Charitable Foundation²⁵

The foundation is based in Calgary and supports various social entrepreneurship initiatives including the above-mentioned enp-AB; it also supports:

- Social EnterPrize, an award program created to recognize Canadian leaders and impactful non-profit organizations.
- Canadian Youth Business Foundation's socialpreneur initiative, which provides funding and support for young social business entrepreneurs in Alberta.
- Social Enterprise World Forum, a premier social enterprise event in Canada.

Canadian Youth Business Foundation²⁶

The CYBF focuses on helping young entrepreneurs between the ages of 18 to 39. CYBF offers a full range of services including resources, business consulting, mentoring and financing. The Government of Alberta works together with CYBF currently. CYBF does not focus solely on social enterprise funding, however in collaboration with Trico Charitable Foundation CYBF has started Alberta's 'socialpreneur' program. Trico has committed \$2 million dollars into this project.²⁷ This research was unable to track a specific set of applications designated for the socialpreneur program. There are however six CYBF programs, which are designed to meet specific, needs of young entrepreneurs. It is likely that the socialpreneur program/funding is built into the six available CYBF programs.

²³ enp Canada, *About enp Canada*, <http://www.socialenterprisecanada.ca/en/gettoknowus/nav/aboutus.html>

²⁴ Social Enterprise Fund, *Social Enterprise Fund*, <http://socialenterprisefund.ca/>

²⁵ Trico Charitable Foundation, *Trico Charitable Foundation*, <http://www.tricofoundation.ca/>

²⁶ Canadian Youth Business Foundation, *Canadian Youth Business Foundation*, <http://www.cybf.ca/>

²⁷ Richard Gotfried, "Media: Trico Charitable Foundation commits \$2 million to Social Entrepreneurship Movement", Canadian Youth Business Foundation, https://www.cybf.ca/cybf_press_media/trico-charitable-foundation-commits-2-million-to-social-entrepreneurship-movement/

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<http://www.edmonton.com/edmonton-research-park/default.aspx>

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Startup Edmonton, *Startup Edmonton*, <http://startupeedmonton.com/>

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DRAFT

Date: 1 April 2014
To: Students' Council
From: Marc Dumouchel, General Manager
Re: PAW Fee Update

This note is just to update Councillors on the PAW Centre fee.

Summary

Effective January 1, 2015, students will be assessed a fee of \$26/term during Fall and Winter sessions, and \$13/term for Spring and Summer students. The fee will be collected until the \$30 million loan for the PAW Centre is paid off.

This fee is **lower** and will be assessed for a **shorter period** than authorized in the original referendum (\$26/\$13 over 20 years v. \$29/\$14.50 over 35 years).

Background

1. A loan from the Alberta Capital Finance Authority for \$30 million will be taken out to cover the student-funded portion of the PAW project. This loan will be taken out in June 2014, will have a term of 20 years, and will carry an interest rate of 3.216%.
2. The foregone interest revenue – the opportunity cost – of the interim internal financing of the project will be added to the amount that the student fee pays for.
3. Any money left over at the end of the repayment period will be held in a reserve account. Use of the reserve account is restricted to improvements to the student focused areas or the fitness centre, and must be agreed to by the student associations.
4. Students originally approved a fee of up to \$29 per term (\$14.50 for spring and summer terms) to be assessed for up to 35 years.
5. At current fee and enrolment levels, the approximate value of the reserve at the end of the loan repayment period will be \$572,000. (These are initial estimates only.)
6. Consultation with the Associations (SU/GSA) is required before the University sets the fee amount and this process is formally underway right now.
7. The fee may only be collected as long as required to cover the costs of the student-funded portion of PAW - i.e., the loan and bridge financing.
8. No new fees for use of the new facilities are permitted for the life of the PAW Centre Agreement.
9. The fee cannot be assessed until the facility is usable. If the fee is collected early, refunds will be issued. The fee will show up on student statements in September (as a fee for the January term). The fee is being set up and approved in advance of facility completion due to the long timelines on fee assessment.