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THE IRON WARRIOR

THE NEWSPAPER OF THE UNIVERSITY OF WATERLOO ENGINEERING SOCIETY

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<http://iwarrior.uwaterloo.ca>

PDEng Independent Review Released

ADRIANA CAMERON
2T MECHANICAL

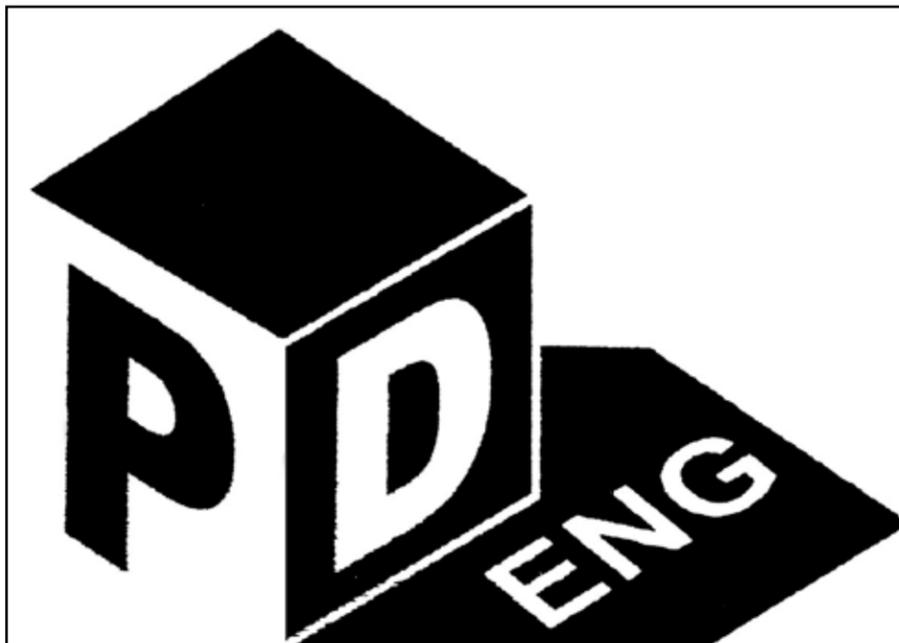
On the morning of Friday October 23rd, all undergraduate engineering students received an email from Dean Adel Sedra indicating that the PDEng Independent Review report was now available for reading and review.

The PDEng independent review was initiated by Dean Adel Sedra in spring 2008, after students expressed concerns relating to the PDEng Programme. The Dean mandated that the review address six key aspects of the course. The aspects that were to be addressed were: programme objective, curriculum content, programme delivery, programme administration, relationship to the other aspects of the Engineering curriculum, and additional opportunities that can be realized through the PDEng Programme.

The independent review was conducted by a panel consisting of three external reviewers.

The external reviewers were: Dr. Tyseer Aboulnasr who is a professor and the Dean of UBC's Faculty of Applied Science, Diane Freeman who is an associate at CRA as well as the President-Elect of PEO, and Dr. Carl Hamacher who is a professor emeritus from the ECE Department of Queen's University.

In the summer of 2009, the reviewers visited the UW campus and interviewed students, representatives from the Engineering Society (EngSoc), PDEng staff, Department Chairs, faculty, Co-operative Education and Career Services staff, an Alumni coordinator and co-op employers. Prior to the campus visit, the reviewers were provided with a self-study by PDEng Programme staff. Engineering Society 'A' provided the external reviewers with results of student forums, results of student surveys, a response to the Dean's six aspects of the review, and recommendations following the student survey.



Based on the information provided to the reviewers, the reviewers responded to the six aspects that they were mandated to, and made six recommendations to

improve the programme. The recommendations relate to: healing relationships,

See REVIEW COMPLETED from Page 10

EngSoc Nominations NOW OPEN

MICHEAL SELISKE
CHIEF RETURNING OFFICER

Elections are coming!! Elections are coming!! Do you love it when the halls are filled with people's faces on colourful posters? Have you ever wanted your face on one of those posters? Do you love being a student leader? Have you always wanted to help run a society which has over 3000 members? All of your dreams and more can come true by running in the EngSoc elections.

Nominations are open **RIGHT NOW** and will close on Monday November 9th. Stop by the the Orifice to pick up a nomination form, fill it out and then attend a mandatory meeting on Monday November 9th, at 4:30. That is all you need to do to run. SIMPLE!

All Exec members are very approachable and will gladly discuss what is involved in their position (email addresses are provided at the end of this article). I am also available to talk about election policies and how things will run as well, so don't hesitate to contact me (cro@engmail.uwaterloo.ca).

Are you in Nano or another 8S or 4S program and are switching streams in the middle of your term? In light of some new policy and constitution changes, you too can run for EngSoc Exec- just grab a running mate and run as one person. More details about these changes can be found out by contacting me, and we can discuss the specifics.

Once nominations are closed on Monday See **MORE INFORMATION** on Page 4

Waterloo Team Score Top Marks Team North Secures 4th Place Finish at Solar Decathlon



ANGELO ALAIMO
2B ELECTRICAL

The 2009 solar decathlon, hosted by the United States Department of Energy took place from October 8th-18th on Washington, D.C.'s national mall. After beginning in 2002, the event now held biennially, finished its fourth iteration where teams from around the world compete by trying to design, build and operate the most energy efficient solar powered houses.

Waterloo's involvement with the Solar Decathlon took the form of Team North (aka Team Ontario/BC during competition), consisting of over 50 students and faculty members from three Universities - Ryerson, Simon Fraser (SFU), and Waterloo. Submitting a Response to a Request for Proposal was the team's first step to being able to

compete in this year's competition. Over 80 teams from around the world responded to the request, and from those 80, only 20 were selected to compete. After the final twenty teams were selected, work began on each house for close to two years leading up to October's competition in D.C.

Over the course of the competition, teams were judged in 10 different contests relating to aspects of the home design with each contest being worth a certain amount of points out of the possible competition total of 1000. For 7 of the 10 contests, Team North ranked in the top 5 with the team's highest contest ranking coming from communications in which they placed 2nd. After all house judging concluded at the end of the last competition day, Team North placed 4th overall out of the twenty teams, narrowly missing 3rd place by less than 15 points

Team North of the aforementioned total of 1000 possible points. Maun Demchenko, Media and Public Relations Director for Team North had the following to say about the team's expectations and results in the competition, "We knew we had a really good shot. We had worked so hard and so long on the project as we felt really confident about the design and the amazing engineering innovations that we had incorporated into the house. I think we had hoped to placed a little higher, but the three teams that came before us were also really fantastic, it was a very tough competition. We are really honoured to have placed in the top 5 out of 20 teams."

As Demchenko mentioned above, competition was very tough. Team Germany ended up with a perfect score of 150 in the

See **AGAIN IN 2013** on Page 4

Letter From The Editor

Views on the Referendums



TREVOR JENKINS
EDITOR-IN-CHIEF

Off the top, I'd once again like to thank everyone who helped make this issue of *The Iron Warrior* come together, and especially those people who managed to get their articles in on Friday night. Meeting deadlines makes production go so much smoother.

I'd also like to apologize for the way the last issue turned out. If you read last week's editorial you'll know that I was working on the paper back at home in Mississauga during the Thanksgiving weekend. The draft was done and sent out for review by our Advisory Board and staff so that they could point out all of the errors that I may have overlooked in the production process. When I brought the file back to campus to fix the errors and upload the file, everything fell apart because despite Adobe's claim that InDesign CS2 and CS4 are back and forward compatible with each other was a lie. As a result, I ended up redoing two day's work in about 10 hours. As such, many things got overlooked. I'd like to apologize for this since (I hope) you expect higher quality from *The Iron Warrior*.

Moving on from that, I'd like to talk about something that will have long term repercussions on student here at UW for years to come: **THE THREE STUDENT REFERENDUMS!** I hope that most of you will know what the referendums relate to, but for those of you who don't, take a look at vote.feds.ca and the posters around campus for more details. Ultimately, I'd like to share some of my opinions and views on the three upcoming referendums with you.

Now for the politically correct disclaimer: These are my own views and do not reflect the opinions or views of The Iron Warrior or the Waterloo Engineering Society. For more information, be sure to check out vote.feds.ca for detail about the three referendum questions.

Student Services Complex

The first one up for consideration affects both undergraduate and graduate students, and will have the greatest hit on our wallets: the proposed student services complex. The building would be located at the northwest corner of University Avenue and Seagram Drive, in the eastern portion of Parking Lot H. If the proposal passes, an increase of \$49.50 would occur to the Students Coordinated Plan once the majority of the building is completed in 2012-2013. The fee would remain in place until the undergraduate portion of the budget is paid off (2032-2033). The \$47.2 million budget for this project is being split between undergraduate students (65%), graduate students (15%), UW Food and Retail (9%) and the central university (11%). The above cost breakdown is based on the approximate percentage of the building each group will use. The university has agreed to pay for the estimated \$1 million per year operating costs of the building.

The building would centralize a large number of student support services including an expanded Counselling Services office, an expanded Office for Persons with Disabilities, the Ombudsperson and an expanded Writing Clinic. In addition, notable perks such as a movie theatre, which would be used during non-peak periods as a lecture hall, a new Grad House facility, more Food

Services Outlets and a 24-hour study space that will be larger than the current DC Learning Commons.

I was very sceptical of this plan originally but it has slowly grown on me. I've noticed that university students have the tendency to just bitch and moan over every little issue that arises, whether it's PDEng, how ugly our campus is or paying more money to get a building that they could actually benefit from. It's no secret that student space is at a premium on campus. Outside of POETS, the Math Comfy Lounge, and the SLC, there really isn't any large social space on campus; whether it's just to meet up or host an event. Add that on top of the fact that study space is getting eaten up, mainly because of exploding enrolment and you'll find a campus that isn't as student friendly as possible.

We have a legitimate chance to correct errors of the past. While I'd much prefer the building to be a "student-only" building, similar to the way that the SLC operates, the reality is that this will never happen. This is an opportunity that we can't pass up. We have the chance to create a student hub for the southern section of campus. No longer will we have to trek across campus in order to get to the SLC. With a new hub down here we will have another place to congregate outside of POETS, the only real choice.

Not only will the social aspect help improve our lives but the expansion of student support services can benefit us as well. The promise of an expanded counselling services will be music to the ears of anyone who has ever had to go there. Personal issues aren't something you can plan ahead for and with appointment wait times taking up to three weeks, the "support" just isn't there. Whether or not this will actually be the fix-all solution to the problem remains to be unseen but it appears as a legitimate step forward to rectify something that the campus has long struggled with.

Overall, I strongly encourage you to vote in favour of this proposal. For the majority of you, you'll never actually be impacted financially on it since the fee won't come into place until 2012 to 2013. For those of you who are around when it's finished, you'll more than appreciate it if history has anything to say. Enrolment has increased by over 3,000 students in the last five years alone- nearly 600 students a year. Based on that trend, we can expect another 1,800 students to join us here by 2013. Will the SLC still be enough space then?

Health Services Expansion

The original Health Services building was built in 1968 when UW had only 9,000 students. Due to the fact that the student population has grown, but the space available for health facilities has not, Health Services has been forced to hold past years' flu clinics in the SLC, put offices in the infirmary wings, and cut the number of day beds from six to one. The loss of all these services only puts our health and safety at risk.

The current proposal would see Health Services expand from 10,000 square feet to over 30,000, nearly tripling its size. Students would be facing an increase of \$10 per term once the building is nearly completed in 2011-2012. Undergraduates and graduates would be footing the entire bill since the university claims they cannot find a donor to cover the costs, but will fund the operational costs of the facility once it opens. Students would not face any tuition increases as a result of additional doctors since OHIP and other provincial health insurance plans pay for this.

One interesting point I was unaware of was that Health Services will only book appointments for students, and not for staff and faculty. However, it does act as the university's first aid station in order to comply with Occupational Health and Safety regulations in emergency situations. It's clear that we have the most to benefit from this since we are the only users. Have you ever actually tried to book an appointment?

Overall, I strongly encourage you all to support the Health Services expansion.

SoundFM

For those of you who don't know, SoundFM, formerly CKMS, is UW's campus radio station. It was originally funded by a \$5.50 per term fee up until the Winter 2008 term when students voted to remove it. Since then, the station has restructured itself in order to minimize costs, and try to fund itself through private donations, membership fees, money from bands using and advertising. While this situation has worked in the interim, the long term survival of the station depends upon a steady source of income in order to allow for equipment upgrades and cover operating expenses. The station is now entirely volunteer run, so all money raised through the student contribution would go directly supporting their survival.

While most of you may have never listened to SoundFM it is a quality radio station, something that I think lacks in Waterloo Region. (Seriously- Dave FM is one of the best this place has to offer?). They play a quality mix of music, have actually insightful interviews, and feature DJs that you don't want to punch in the face.

The current proposal from SoundFM is a \$2.50 per term REFUNDABLE contribution that all undergraduate students would pay.

One of my biggest reasons for supporting SoundFM is because of my experience here at *The Iron Warrior*. Funding for us has always been an issue, and without the generous support of organizations like EngSoc, WEEF, and The Engineering Dean's Office we would never have survived for the 30 years that we have. I can only imagine what it would be like to operate SoundFM where there is no other group to turn back to for support in tough financial times. Student media plays a valued role on campuses across the globe, and while places like Facebook can help with advocacy, it will never replace the traditional newspaper or radio group.

From my understanding, once we lose the station it's over. Without funding to operate, SoundFM's chances of long term survival are slim to none. If they cease operation, our campus loses its licence to operate a radio station, and due to new regulations, it's nearly impossible to get a new one issued in this day and age.

I strongly urge you to support SoundFM in this upcoming referendum. The commitment is small and without them we'd lose a strong voice in student media that's accessible to everyone across campus.

More than anything, I strongly urge you all to get out and vote in the three upcoming referendums. I believe that all three will be pivotal moments in determining the long term direction of the university. As such, deep thought and consideration needs to be undertaken before making a decision.

Check out vote.feds.ca for more information about all of the referendum questions and details on how to vote.

THE IRON WARRIOR

The Newspaper of the University of Waterloo Engineering Society

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The Iron Warrior is a forum for thought-provoking and informative articles published by the Engineering Society. Views expressed in The Iron Warrior are those of the authors and do not necessarily reflect the opinions of the Engineering Society.

The Iron Warrior encourages submissions from students, faculty and members of the university community. Submissions should reflect the concerns and intellectual standards of the university in general. The author's name and phone number should be included.

All submissions, unless otherwise stated, become the property of The Iron Warrior, which reserves the right to refuse publication of material which it deems unsuitable. The Iron Warrior also reserves the right to edit grammar, spelling and text that do not meet university standards. Authors will be notified of any major changes that may be required.

Mail should be addressed to The Iron Warrior, Engineering Society, E2 2349A, University of Waterloo, Waterloo, Ontario, N2L 3G1. Our phone number is (519) 888-4567 x32693. Our fax number is (519) 725-4872. E-mail can be sent to iwarrior@engmail.uwaterloo.ca

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Send your submissions to iwarrior@engmail.uwaterloo.ca

Fall '09 Publication Schedule:

November 18, and December 2

GO ENG GIRL GO

Encouraging Teenage Girls to Consider Engineering

KATE HEYMANS
1A CHEMICAL

On the morning of Saturday October 17th at 7am, the sun wasn't even up (let alone most of the UW students unless they were just going to bed after a really long night) yet a small group of volunteers were working hard - signs were put up, tables were assembled, and supplies were gathered in readiness for the 2009 Go Eng Girl event at Waterloo. The purpose of the event? To show young teenage girls in grades seven to ten that engineering is fun!

Registration started promptly at 9:00 (one enthusiastic girl was there with her dad at 8:00) and people were waved

in. A few issues emerged ("where can I possibly park my car without getting a ticket?") but overall the beginning of the event went smoothly. Some of the girls attending were happy to be present but others sported grim faces (my dad wanted me to come" was most often the reason for this). The day started off with giveaway bags (noticeably cheering up those who had been dragged with chains to the event) and followed with a speech by several notable women in engineering.

The girls were then separated into two groups by age. The older girls made "toothpaste" out of soap powder, sodium bicarbonate and a few other ingredients. They were then instructed on

how to test their toothpaste in order to determine how it could be improved. While this was happening the younger ones built bridges out of toothpicks. The bridges were tested at the end with weights and revealed some surprisingly sturdy structures. The parents of the girls were also kept occupied with presentations about both the challenges and the rewards of being a female engineer. The day concluded with a casual lunch during which the girls and their parents were able to ask questions.

Overall the day was a lot of fun for everyone despite the early morning start, and who knows, perhaps these girls will one day come back to UW Go Eng Girl events, but this time as volunteers.



Sylvia Wu

Groups of teenaged girls invaded the 3rd floor of RCH to learn about how awesome engineering is.

Letter To the Editor

Dear Editor,

This letter concerns the PDEng program and the just released scathing independent review of the same.

We all have or should have read the report that basically confirms all that we have suspected or heard about the program for the last 5 years. However I have some things to add from my perspective as a first year instructor in Engineering. Most of you know me as the head TA responsible for hiring and supervising 35 WEEF TAs each year. I also am a graduate of the Civil Engineering program, completing all 3 degrees here, starting in 1966.

What I remember best about my work terms is that I got away from classes, exams, profs, assignments, etc. I remember being in new surroundings, meeting new work mates, enjoying evenings out with no academic responsibilities and getting used to the working world. The only thing we had to worry about was the work report which we could always put off until we got back to UofW. Sometimes one met a new girl friend and started a new relationship. Quite often in summer work terms, construction jobs required long hours on the job until dark. The LAST thing on earth we wanted was to have any assignments to do in the evening. SO here is my 11th commandment:

LEAVE STUDENTS ALONE ON

THEIR WORK TERM!!!

The students I hire for WEEF TAs are generally well rounded, involved, fun-loving people with healthy senses of humour. They are not, generally speaking, prone to taking extreme views. However, for five years, I have listened to their complaints about the PDEng assignments, how they are presented, how they are marked, how their mentors respond. I have been shown the details of their submissions and the cryptic mentor comments pasted in the margins. I have talked with them at length well into the night. I have never seen such animated anger, even from the mildest of TAs. I have known students who have worked as PDEng mentors and have told me stories of pass-fail quotas and being instructed to mark against their own conscience and better judgement.

There is no need to repeat what has been well documented in the report, but the report officially confirms what I have stated above. The report offers suggestions for improvement, but I am pessimistic about whether such improvements are in time. The improvements should have been made after the first year's presentation. What could possibly have inspired the threats made to the PDEng staff that necessitated the lock-down environment they now live in? Such threats are totally unacceptable but why weren't the basic causes addressed

immediately instead of only addressing the safety issue? In my opinion, after five years there is just too much venom and animosity out there for the program to survive.

Considering the calibre of the three reviewers, nothing but a massive response can restore the credibility of or respect for those in charge of doing something about this mess.

In light of the above and the before-mentioned review, here are my recommendations:

- Admit that the whole idea of a work-term "course" was a really bad idea.
- Admit that it was handled in a shocking manner for 5 years that has raised the ire of almost every engineering student.
- Take the good parts of the PDEng course and put them back in the professional engineering concepts courses where they belong.
- **LEAVE STUDENTS ALONE ON THEIR WORK TERM!!!** (Oh, did I say that already??)
- And my final recommendation for the program (not the personnel, but the program)? To borrow the famous line from the movie "Apocalypse Now" ...

TERMINATE WITH EXTREME PREJUDICE!!!

Yours Truly,
Don Fraser
Engineering Undergraduate Office

Middle of Term P**5 Standings

**ANDREW FISHER,
HANNAH LINDSEY AND
SYDNEY BATEMAN**
P**5 DIRECTORS

Time for middle of term P**5 (Paul and Paula Plummer Participation Points) standings! First, your P**5 directors would really like to recognize 1A SYDE, 1A MECH 8s, and 1A Software for their crazy spirit and being the most involved 2014 classes, keep it up! So without further adieu, drum roll please..

1. **Mechicans- 3B Mech**
17096
2. **CHE'1300M- 2A Chem**
17050
3. **FUchem 2010- 4A Chem**
16100
4. **CIVIL THIS- 3B Civil**
13925
5. **Knight of NE- 3B Nano**
10788
6. **The Stoners- 2B Geo**
8785
7. **GOATSE- 3B Soft**
8006
8. **IntenCIVE CIVILis- 2A Civil**
7035
9. **Big Bucking Balls- 2A Nano**
6785
10. **HeavySYDE- 2B SydE**
6760
11. **SparTRONs- 2B Tron**
5975
12. **1A Systems-**
5360
13. **Florian & the Mechrophiliacs- 1A Mech** 5110
14. **I'd Tap That- 2B EnvE**
4425
15. **2A Mechanical**
2500

By the end of term, \$500 will be given to the first place class, \$300 to the second, and \$100 to the third class, so remember attendance at every EngSoc event, class logos, novelties purchases, submitting old exams, class parties, and much much more will earn your class points (check out the engsoc website for a full list and further details)!

More coverage of the PDEng Independent Review can be found on Pages 10 & 11 of this issue of *The Iron Warrior*.

North House May Compete Again in 2013

AGAIN IN 2013 from Page 1

Net-Metering contest by impressively producing twice the amount of electricity than its house consumed over the entire competition. This success in Net-Metering pushed Team Germany to capture its second consecutive first place finish in the decathlon.

As for the next solar decathlon to be held in 2011, Demchenko states the team will likely miss the competition, but could make the next one in 2013, "These things are still very early in discussions. It probably won't be the next decathlon in 2011 but possibly the 2013 decathlon. We just need to find resources and a willing team."

What would happen to such an innovative house after the competition's conclusion? Demchenko mentioned that the house could pop up in Vancouver during this winter's Olympics, "Lyn Bartram and Rob Woodbury of SFU are working with the City of Vancouver to bring North House to the Vancouver Olympics. The current plan is to have the house on display downtown in the Olympic Zone. Negotiations are underway to showcase North House both at the Olympics and afterwards as part of the Vancouver

Green Capital initiative."

For such a complex and challenging competition, Team North's overall placement is very impressive. Out of all the teams competing this year, Team North placed the highest out of the teams competing for the first time. In comparison, all top three teams in the decathlon this year had participated in the past, with two previously placing in the top three. This makes the



Team North

Part of Team North poses with North House on the National Mall in Washington D.C.

future of Waterloo's involvement in the Solar Decathlon very bright, and on behalf of everyone here at *The Iron Warrior*, congratulations!

FEDS Town Hall Forum on Student Space



TREVOR JENKINS
2A MANAGEMENT

On Wednesday October 28th, the Federation of Students held a town hall forum on the current state of student space. As well, impartial information on the upcoming referendums about the Health Services Extension and Student Services complex was provided.

A standard measurement of how much space a university should have is based on two squared metres of net assignable space per student. Based on numbers from 2001, the university currently only has 77.1% of the space it needs.

The proposed Health Services expansion will nearly triple the size of the current Health Services building, from 10,000 square feet to 30,000 square feet. The original building was built to serve only 10,000 students, and now provides coverage to over 25,000 students as the student population continues to increase.

The motivation behind the new Student Services Complex is to alleviate some of the pressure that current academic support services are facing, expand student study space, and provide more social space for the students on campus. The new building will be funded entirely by students, but the university has committed to funding the



Myles Tan

Dennis Huber, VP Administration & Finance speaks at the Forum, while FEDS president Allan Babor looks on.

operational expenses which are pegged at over one million dollars a year.

Additional information, and the referendum questions for each of the buildings can be found at studentspace.uwaterloo.ca, as well as on vote.feds.ca.

More information about the SoundFM referendum can also be found at vote.feds.ca as well.

Run For Exec This Term

MORE INFORMATION from Page 1

November 9th, participants will be given one day to prepare their campaigns and official campaigning begins on Wednesday November 11th and will continue until Friday November 20th. Voting will then be open during the weekend with results being announced at TalEng on Tuesday November 24th. This might seem like a lot of dates but keep checking the mailing list for CRO updates as well as the next issue of the Iron Warrior for an introduction to all of the candidates. The trophy case will be transformed into election central with bios, updates and photos. Information can also be found on the EngSoc website in the elections section.

Elections are a very exciting time and I hope the campaign season will be a great one. If running for an exec position has ever crossed your mind, find out more, then do it! It will be one of the greatest experiences of your life.

The email addresses of exec are as follows:

President: Cat Hay
bsoc_prez@engmail.uwaterloo.ca
VP-Finance: Scott Rankin
bsoc_vpfin@engmail.uwaterloo.ca
VP-External: Cara Kennedy
bsoc_vpext@engmail.uwaterloo.ca
VP-Education: Sasha Averline
bsoc_vpedu@engmail.uwaterloo.ca
VP-Internal: Laura Sission
bsoc_vpint@engmail.uwaterloo.ca

B**5: B-Soc's Big Bad Bowling Bonanza

ANISH BHUTANI
2T CHEMICAL

This terms bowling event, B**5, ran on October 15th. The five-pin bowling event, held at Princess Lanes in Uptown Waterloo, consisted of around forty students on 8 lanes trying to get the best possible score. Thanks to the approved budget from the second EngSoc meeting, all participants

were allowed to bowl two strings (that's bowl talk for 2 games, each 10 rounds long) for free. Participants tried their best to get the highest score possible while trying to minimize the score of others using popular techniques like sneaking up from behind or making loud noises. Overall it was an amazing time, even if no one was able to break a score of two-hundred and cannot wait until next term's event!

ATTENTION ALL GRADUATING STUDENTS!



On-campus photographer looking for models for the up-coming school year

Please send an email expressing your interest to waterlooquestions@lifetouch.com

Lifetouch
Photography

Room 104 Student Life Centre - University of Waterloo

Prestige
PORTRAITS
BY LIFETOUCH

UW Sustainability Report

Waterloo Ranked Worst in Canada (Even Below York)



ALISON LEE
1A NANOTECHNOLOGY

According to the US-based College Sustainability Report Card (CSRC), Waterloo is stuck in the dark ages when it comes to environmentalism. The 2010 survey results were recently released and, for the second year in a row, we have received a grade of D+ in environmental sustainability. This news comes as a shock to most students and faculty members, especially since the survey was self-submitted. Other major Canadian universities scored much higher, with U of T getting a B and York University receiving a B+. A breakdown of Waterloo's results as well as the results of other schools is available at www.greenreportcard.com.

In this year's survey, 332 schools were graded from across Canada and the United States. Schools had the option to complete up to four survey categories: campus, dining, endowment, and student. Regardless of how many of the surveys a university submitted, they were graded across all categories. In Waterloo's case only the student survey submitted, and even then there were some doubts about how that survey was compiled. The inconsistent submission of surveys among universities left many people asking how the CSRC came up with the missing data.

According to the methodology stated on the website, CSRC used various public databases to complete the information for American schools. It also explains that, when those databases were unavailable, it used other public sources of information: "in the case of the 17 Canadian universities included in the Report Card 2010, school websites and/or school administrators provided the necessary demographic information". With this approach,

they were able to construct fuller profiles of schools that did not provide information outright. The Report Card's grading system is based on points allotted for specific environmental factors, such as fair trade purchasing, building standards, and funding of sustainability projects, which is determined based on research and surveys. There are nine individual categories that receive a letter grade based on the total points earned, and the overall grade is an average of those grades. In a university's online Report Card profile, complete survey data is available where available, otherwise only a short blurb is offered to explain the grade. Given that Waterloo only submitted one survey, the only category with more detailed explanation is Student Involvement, for which we got a C. Other categories like Endowment Transparency and Shareholder Engagement, for which we got F's, are virtually unexplained. This leads to the big question: does Waterloo deserve its D+?

The resounding consensus on campus is no. We may not be environmental leaders (yet), but with a Faculty of the Environment and many student groups, we are not entirely inactive. The student survey, filled out by two service coordinators from UWSP, mentioned groups like WPIRG, which oversees other groups like the Bike Centre. They also acknowledged Engineers Without Borders and a number of engineering projects geared towards renewable energy. Other categories we scored a C in were Climate Change and Energy, Food and Recycling, and investment priorities. All other categories had lower grades, which most people blame on CSRC's ignorance of existing programs. In future years, Waterloo may try to complete more surveys, but the problem is that

The results of the Report Card made national news, in which Waterloo was highlighted as being the worst university in Canada.

different surveys are sent to their respective offices and there is no one responsible for ensuring they all get completed. It is entirely up to that office to fill out the survey or not, and seeing as Waterloo gets thousand of survey requests every year, we also have to question if the Report Card is a big enough priority.

From a public relations standpoint, it definitely is. The results of the Report Card made national news, in which Waterloo was highlighted as being the worst university in Canada. In seems that after each year, the CSRC gains more reputation, so Waterloo should make a bigger effort to improve its environmental score. In fairness, the CSRC claims that "before publication, we sent a verification email with draft findings consisting of the nine category paragraphs to all school administrators that completed surveys as well as to administrators who had either not

responded or had declined participation." The only issue is that, if administrators declined to respond or participate, they would probably decline to review the independent research as well. Perhaps in the future, the draft findings could at least be assessed, because surely there was information missing this year.

From a purely environmental standpoint, Waterloo should always be improving its greening strategies regardless of a poor "green report card". It shouldn't take a slap in the face from a third party group to force us to face the issues at hand. Environmental student groups may not be as prevalent in the engineering realms of campus, but a trip to the WPIRG office in the SLC or one of the ENV buildings should reveal a greener side of Waterloo. With the status quo, we certainly don't deserve an A+, but a D+ is not accurate either. Environmental change doesn't happen on its own, so if our D+ upsets you, then do something

Rankings For Canadian Universities Included in the Report Card

York: B+
McGill: B+
Alberta: B+
UBC: B+
Calgary: B+
Dalhousie: B
University of Toronto: B
UNB: B
Queen's: B-
Carleton: B-
Saskatchewan: C+
McMaster: C+
Western Ontario: C
Victoria: C
Guelph: C
Manitoba: C-
Waterloo: D+

How Waterloo Scored

Administration: D
Climate Change & Energy: C
Food & Recycling: C
Green Building: D
Student Involvement: C
Transportation: D
Endowment Transparency: F
Investment Priorities: C
Shareholder Engagement: F
Overall Grade: D+

about it! Bringing a mug to the C&D every day is a start, but there are so many more opportunities on campus and all it takes is some initiative. So complain all you want about our mark, but then go out and join something or start something yourself so we can prove them wrong next year.

External Associations Fair Comes to POETS



KEVIN LING
2B COMPUTER

This term B-Soc hosted the first external societies fair in recent memory. At this event, representatives from all of the major external engineering student associations were present and explained to the audience what their organization does, and how undergraduate students can get involved with them. The event took place on Thursday, October 22, and was put together by Nikki Weckman.

The organizations that were present for the event were the Canadian Federation of Engineering Students (CFES), ESSCO (Engineering Students Societies' Council of Ontario), Professional Engineers Ontario (PEO), Ontario Society of Professional Engineers (OSPE), and Engineers Without Borders (EWB). As well, Howard Brown, of Brown and Cohen Communications and Public Affairs, came out to inform students about the Government Liaison Program.

The CFES VP Communications, Michael Seliske, was first to speak. While CFES does not directly represent engineering students, they represent engineering societies across Canada which in turn represent students. Each year, CFES holds a weeklong congress event which is much like a summit. Delegates from every member university across Canada attend congress, which is typically held in January. This year's congress event will be taking place in Hamilton, hosted by McMaster University. Registration for the event will be coming up soon. As well, CFES is currently promoting its charity cookbooks. The cookbook contains

many simple to follow and delicious recipes. They are currently on sale in Novelties for \$10 each. All proceeds from the cookbooks go to the Canadian Red Cross.

Next up to present were Spencer McEwan and Alessia Danelon, President of and VP Services of ESSCO, respectively. ESSCO is a more localized version of CFES, and represents engineering societies across Ontario. Each year, ESSCO holds several major conferences, including its Annual General Meeting and First Year Integration Conference (FYIC). Another project that ESSCO is working on right now is a cross province Rube Goldberg machine. This project is for National Engineering Month and will have a machine at each member university. One machine will be started and at the end, it will send a message via the internet to start a machine at the next university. At the end, the final machine will hit a button which will light up the windows of the Toronto City Hall with the letters "ERTW", which stands for "Engineers Rule the World". ESSCO is always looking for more student members, and the FYIC is a great place for new engineering students to become acquainted with ESSCO. Many student leaders in internal and external engineering student societies were once participants at FYIC. The next FYIC will take place in February and all interested first-year students are encouraged to apply.

Changing pace from student run societies to a professional organization, Manoj Choudhary spoke about Professional Engineers Ontario. Choudhary is the Student Liaison Co-ordinator for PEO. PEO is the self governing body that regulates the engineering profession in Ontario. Currently, the University of Waterloo has more student members of PEO than any other university.

Liz Greenland of OSPE followed and gave a brief rundown of what OSPE does and the services that it offers. OSPE promotes and advocates for engineers in Ontario. They offer things such as professional development courses, a Job Centre, and member discounts on everyday things. In the online Job Centre, members can get help from human resource specialists to find jobs. There is also an online resume bank for employers looking to hire engineers and members looking for jobs. Membership to OSPE costs \$25 dollars and is open to all engineering students.

The only presenter at the event that is not a direct representative of an engineering association was Howard Brown. Brown gave a presentation titled "Preparing Engineers for the Political Process and Public Office" in which he encouraged all students present to get involved with student and government politics. Brown's presentation tied in directly with the PEO's Government Liaison Program (GLP) which he helps to promote. Currently, the federal House of Commons has only 6 engineers, out of 308 members of parliament. In the Ontario legislature, there are only two engineers out of 107 members. Compared to the number of other professionals found in federal politics, engineers are underrepresented. The GLP has a goal to increase the number of engineers in the Ontario legislature to 11 by the year 2011. A part of this goal is also to have 6 of the 11 engineer politicians to be women. They call this goal "11 by 2011", and likewise that have an even longer term goal titled "27 by 2027". This program was developed by the PEO to help protect its right to self regulate. Brown explained that some years ago, the government was considering challenging the PEO's right to self regulate the profession. There is a segment in every Engineering Di-

mensions magazine that talks about the GLP and encourages engineers to consider a career in politics. Brown ended his presentation by encouraging anyone who has a problem with student, municipal, provincial, or federal government to get involved. Anyone who is interested in politics and is considering getting involved can email howard@brown-cohen.com for more information.

Finally, the last speaker to present at the event was Gajan Sathanathan, VP Campaigns for EWB. He gave a brief overview of the background of EWB and what it is doing today to promote change. EWB was originally founded by two University of Waterloo engineering graduates who felt that the advancements in engineering should be used to help raise the quality of life of people around the world. Today, EWB is a registered charity with over thirty-thousand members nationwide. They are the largest non-governmental organization in Canada. Several causes that they have been fighting for recently include fair trade coffee and the untieing of government aid. One of the slogans that they promote is ESTW, or "Engineers Serve the World". EWB works with engineering student societies across Canada to promote awareness and raise support for their cause. More information about EWB, and registration for their mailing list, can be found at www.myewb.ca.

On the whole, the external associations fair was a success. As many students were in midterms during the week of the event, it was originally expected that there would only be around 15 students in attendance. Surprisingly, the event netted almost double the expected amount of students. Hopefully events like this will continue in the future to help promote external organizations within the engineering student community.

It's Time to ReThink Waterloo!

**ALEXANDER
HOGEVEEN RUTTER**
2B ELECTRICAL

Fellow Waterloosians, it is time to ReThink. This was the theme of ReThink Waterloo, a conference hosted by All Our Relations Saturday, October 17th. Two organizations here on campus, Waterloo Public Interest Research Group (WPIRG) and UW Sustainability Project (UWSP), collaborated in running the event.

A few awkward attempts at greenwash aside, it was a well-executed and intellectually stimulating experience. Over 1200 people attended the keynote speaker, David Suzuki, in his fighting best. Suzuki had some quaint stories from the past, and some pretty dire warnings for the future. He conjured up some pretty neat images to fully remind us of the potential damages of Climate Change.

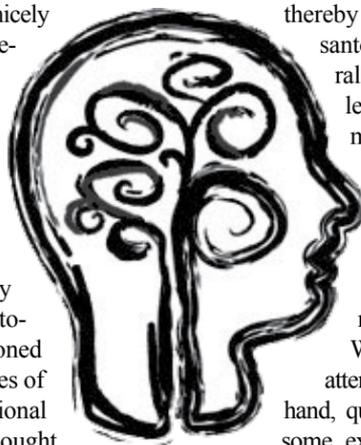
For example, imagine one algae in a test tube, doubling every day. Let's say the test tube has enough space for 50 days (about a quadrillion, if I did my math right). On the 47th day, an alga claiming they were running out of space would seem pretty darn alarmist. By the 48th day, they would have only used up a quarter their space, but by the 49th day it would be too late. If you can draw the connection, it was a fairly poignant reminder of

the perils of constantly seeking exponential growth in population, GDP, resource extraction, etc. This tied nicely into the premise of "ReThink"—perhaps we need to completely rethink our metrics for growth.

Another noteworthy environmental speech came from prominent ecofeminist Vandana Shiva, delivered at Hagey Hall on Wednesday, October 21st. Her impassioned call to action on the issues of deconstructing conventional models of economic thought was well received by the crowd. She spoke eloquently about the damages caused by giant agro-business mega-corporations like Monsanto and how they serve as the judge, plaintiff and jury in the shaping of World Trade Organization Agricultural agreements. A woman not just of words, but action, she then spoke of her work in encouraging seed banks, a way to provide farmers with free or low-cost seeds, provided they return the seeds the following harvest. This practice stands in stark contrast to the poli-

cies of companies like Monsanto, who contractually obligate farmers to not save seeds, thereby purchasing anew from Monsanto each year. The ensuing spiral of debt, where farmers make less each year for crops and pay more for seeds has led to over 200,000 suicides over the past decade.

Despite the excellent reception to both these thinkers' ideas, I have to wonder if we really are prepared to rethink. While Suzuki's lecture was well attended, the workshops beforehand, quite frankly, were not. Despite some excellent discussions about car sharing (www.peoplescar.org), solar power, organic farming, and various other sustainable retrofits and practices, there did not seem to quite be the critical mass required for substantial action on climate change. High school students around the region prepared well coordinated and disciplined presentations regarding the Seven Generation Challenge, taken from the



reThink
WATERLOO

Frosh Battle for Supremacy, Engineering Style

DEREK BENNEWIES
VICE CHAIR, IEEE STUDENT BRANCH

If you happened to be on campus on the morning of Saturday, October 17th, you may have run into some interesting events. If you walked by the fishbowl (DC 1301), you probably saw a lot of students huddled around a very small table. Normally this wouldn't be cause for excitement – confusion maybe, but not excitement. But what if I told you that there were robots? Yes, this was the famed sumo robot competition. That wasn't the only thing going on, however. In Engineering 3, the wind tunnel was running all morning, testing out a variety of turbine designs. Bikes were being designed and redesigned in DC 1351. And way out at the fields at the corner of Columbia and Fischer-Hallmann, there were rockets and RC planes flying all day.

All these events, tied together, were the IEEE First Year Engineering Design Competitions. These five competitions represented a collaboration between the IEEE (that's the Institute for Electrical and Electronics Engineers) and a variety of other student clubs and teams: The Waterloo Space Society, R3Design, UW Robotics Team, Sustainable Technology Education Project (STEP), and Waterloo Aerial Robotics Group. Each team ran their own competition, highlighting a different field of engineering. Teams signed up in droves for these events; over 50 teams of about five frosh each registered in total.

Frosh had been working on their designs for about three weeks, and finally got to put them to the test. Most of the competitions had a fairly simple premise. For the sumo robot, the test was to push another robot out of a ring. Wind turbines were competing to produce the greatest voltage. Rockets were trying to hit a specific target on the ground, on the other side of the field. With RC planes, teams had to race their designs through a given course. As for bike design, teams had to demonstrate increased ease of use, functionality, and commercial appeal of their design.

There were a lot of impressive, creative, and (generally) functional designs. One sumo robot, which some competitors referred to as "the Mercedes of robots" definitely had the



Derek Bennewies

Rockets take flight as part of the IEEE First Year Design Engineering Competition.

same look and feel as one of those new Macbooks. One of the teams in the aerial robotics competitions decided to scrap the majority of the supplied kit, and instead design a delta-wing style plane. And in the bike design competition, one team went to the length of cutting their bike frame in half, and then installing a hinge so that it could fold. These were some innovative creations all-around. Don't forget that all the competitors were frosh.

For anyone interested in seeing some of the top designs, feel free to come out tonight (November 4th) to RCH 301 at 7:00pm. This is where the winning teams from each competition will be getting their prizes, and hopefully talking a little bit about their designs.

The IEEE Student Branch would like to thank Professors Douglas Harder and Siva Sivovthaman, Student Relations Officer Robin Jardin, The Dean of Engineering Office, The Electrical and Computer Engineering Department, IEEE Kitchener-Waterloo, and all of the participating student clubs for making this event a huge success. We look forward to making this event even better next year.

UW Robotics Team Mini-Sumo Competition

KENT SOLTZ
2B MECHATRONICS

Saturday October 17th the University of Waterloo Robotics Team hosted its annual Mini-Sumo Robot Competition. The competition is the team's introduction to those interested in robotics but with little experience. The teams are provided a circuit board, components, motors, wheels and sheet metal to build their robots. The teams are instructed in each aspect of the competition from electronics troubleshooting and soldering to mechanical design and sheet metal fabrication to basic software design.

This year the competition was sponsored by the IEEE who organized competitions with the Waterloo SpaceSoc, R3Design, STEP and WARG on the same day. The competitions were promoted on Rogers Daytime during the week leading up to the competitions.

The Mini-Sumo Competition saw several teams work extremely hard to get their robots working in time. After a couple sleepless nights the competition had arrived!

After the opening ceremonies the teams presented their robots to the three judges. The judges represented industry as well as academia. Dan Charbonneau from 2G Robotics, Ryan Garipey, a UW Masters Student and co-founder of Clearpath Robotics, and Professor Sanjeev Bedi, Director of Mechatronics evaluated each team's robot on their software strategy, mechanical design, and overall robot construction.

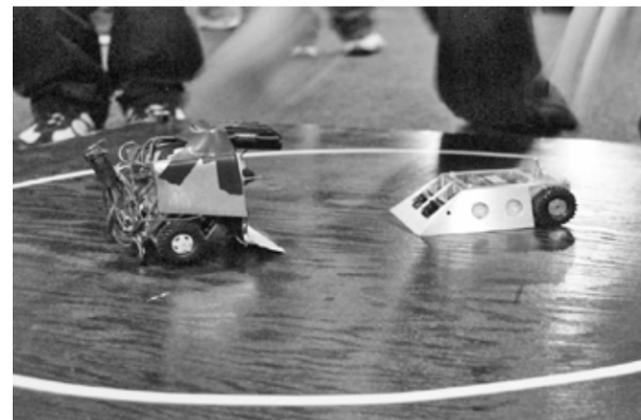
The competition got off to a fast start with the round-robin matches. Each team acquired at least one win in the round-robin. The action was intense as the robots grappled and pushed each other out of the ring! The top four teams advanced to the playoff round where their robots would fight a best of three rounds.

The semi-finals saw some extremely close battles with round lasting several minutes of back and forth action! The first semi-final

First Nations notion that actions should take into consideration the ideas of seven generations past, and the needs of seven generations forward. They presented some simple, yet effective measures for promoting sustainability in the areas of food, water, shelter, transportation and stuff. Yet, seeing my own mediocre attempts at promoting sustainability in my own home being quashed, I can't help but wonder how many of those 1200 will go home and implement even a single practice.

Further cause for discouragement came from attending the 350 International Day of Protest the following Saturday, in anticipation of the upcoming Copenhagen Climate talks. Events were hosted worldwide, but here in Waterloo less than a hundred individuals signed the petition and marched to MP Peter Braid's office (who wasn't there-oops). We made a bit of noise, and a few cars honked their support, but not exactly heartwarming to those hoping for change on a societal scale. Again, some great discussion, motivated, passionate people, but what is the result-will politicians heed the message if the environmental movement continues to be seen as a fringe group of agitators? Lots of great ideas, lots of motivated people, but will it be enough to rethink and change the way we live our lives? I'll have to think about it.

match pitted the team of Ryan Turner against Fillipp Demenshonok's team's robot, Torture Toaster. After two rounds, Ryan Turner's robot came out on top and earned a spot in the finals. The second semi-final saw Matt Lang's team's robot, Wafflez, against Leigh Pauls' team's unique design, Burnt Driver. After each team won one round apiece the electricity in the air and the circuits was palpable! After a nerve-racking few minutes filled with several near



Derek Bennewies

Robots fight it out at the annual Mini-Sumo Robot competition.

eliminations, Waffles emerged victorious! This set the Torture Toaster and Burnt Driver against each other for the bronze medal match. These robots were very evenly matched and after splitting the first two rounds, the robots were reset for the third and final round. The robots circled each other for a while and met in a clash of epic proportions! Neither would concede ground! After about eight minutes of the robots locked together but still pushing and the smell of melting motors in the air, the captains each agreed to a draw for third place. The finals matched Matt Lang and company's Wafflez against Ryan Turner's undefeated 'bot. Wafflez put forth a valiant fight but ultimately Ryan Turner's machined menace prevailed.

A huge thanks goes out to all the technical mentors who gave up their time to be in the lab to assist the teams as their creations came together! Special mention goes to James Servos who spent 2 sleepless nights in the lab in the days before the competition.

Those interested in more information about the UW Robotics Team email robotics@eng-mail.uwaterloo.ca

EngSoc Does The Terry Fox Run

Money Raised To Fight Cancer



ALISON LEE
1A NANO

On Sunday October 18, there were seven students dressed in bright 80's clothes running laps around Ring Road. Besides making an edgy fashion statement, they were running to raise money and awareness for the Terry Fox Foundation. With ABBA music, leg warmers, snacks, and more than a couple of stares from strangers, the runners made it once or twice around ring road in style. The Terry Fox Run was the October event hosted by EngSoc Charities and it brought in over \$500 for cancer research.

cer research.

The Terry Fox Foundation was created on Terry Fox's principles of generosity and inclusion. The foundation supports numerous researched-based projects and also continues the story of Terry Fox. His life has been documented in many books, films, and television series, but it is always worth repeating. Terry was born in Winnipeg on July 28, 1958. A very athletic teenager, he was diagnosed with bone cancer at age 18. After spending time in the hospital and having his leg amputated six inches above the knee, he started to dream about running to improve the lives of other cancer patients. Starting on April 12, 1980, Terry Fox's Marathon of Hope lasted 143 days and covered 5,373 km. His philosophy was

that if every Canadian donated a dollar, \$30 million would go a long way to cancer treatment and prevention.

To date, over \$400 million has been raised in Terry's name. Terry Fox Runs like this one happen internationally every fall as Terry's story spreads across the world. The funds raised so far have accomplished a lot, given that it all started with one man with amazing determination. However, Terry didn't consider himself a visionary: "I am not a dreamer, and I am not saying that this will initiate a definitive answer or cure to cancer. But I believe in miracles. I have to." His actions were catalysts for many research advancements and improvements in the lives of cancer patients, and his story is considered a part of Canada's heritage. More information about Terry Fox, the Run, and the Foundation is available at the website www.terryfox.org.

it live dressed in "tight and bright", participants ran or walked for about half an hour. It was a brisk 9°C and midterm season was looming, but the sun was out and the workout music got people moving. Following the run, they were greeted with refreshments, granola bars, and more 80's music. Lessons learned? Oversized socks and accessories are not practical exercise apparel! What else was gained? After collecting many pledges from family and friends, the final amount raised was \$515. Laura Parsons, an EngSoc Charities director thought the Terry Fox Run was a success: "Considering it was right before mid-terms we were happy with the turn-out and everybody seemed to have a good time!"

Pictures of the run are posted on the EngSoc Charities facebook page, where you can also check out other charity events like Movember, the month formerly known as November. Thank you to everyone who donated to the 2009 EngSoc Terry Fox Run, and to those who didn't, be sure to participate in the future!

Movember Returns!

LAURA PARSONS, GOLBAHAR RAFINEJAD, & ANNA SAXENA
CHARITIES DIRECTORS

Jones, President and CEO, Prostate Cancer Canada. "Together we are changing the face of men's health."

Movember is the month formerly known as November where men grow a moustache for 30 days to raise awareness and funds to help find a cure for prostate cancer. The money raised by Movember in Canada goes directly to Prostate Cancer Canada (www.prostatecancer.ca).

Men and women can get involved by registering on the Movember website and raising or donating funds throughout the month of November. The idea is to start the month clean-shaven, and grow your facial hair until the end of November. At the Movember party on November 30th we will celebrate the event and give out prizes for the best moustaches. This year we're planning a joint party (location to be announced) for the Big Mo on Campus with participants from Engineering, Arts, Math, and anyone else who wants to come out.

According to the Movember website, prostate cancer is the most common cancer affecting Canadian men. During his lifetime, 1 in 6 men will be diagnosed with the disease, and this number is expected to rise to 1 in 4 within a decade. "Prostate cancer is over 90 per cent curable if detected and treated in its earliest stages. In addition to investing in research, Movember raises awareness and ultimately saves lives," said Steve

You can register for Movember at: <http://ca.movember.com/register/5923> or visit the EngSoc Charities Facebook group for more information.

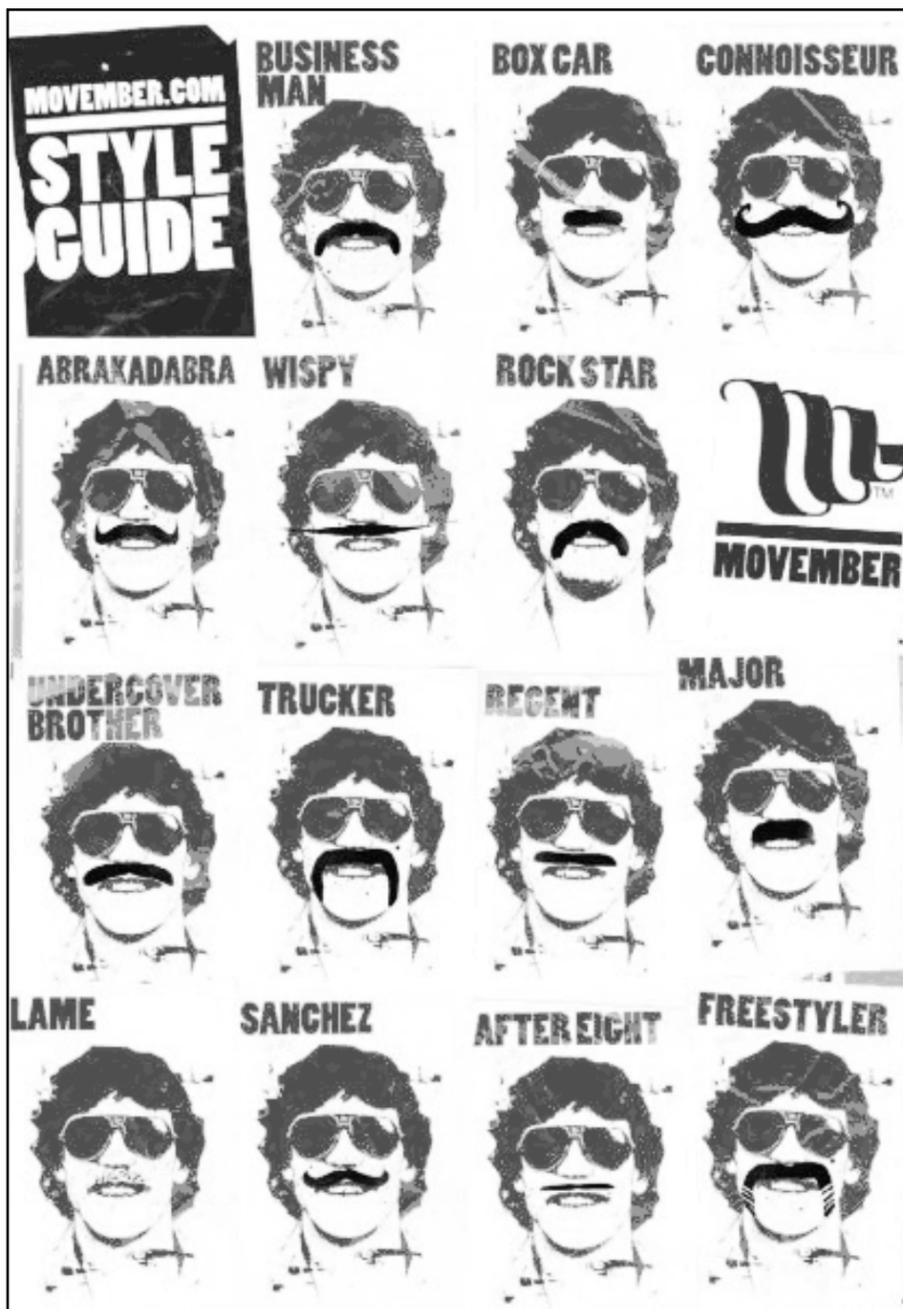
Remember, every moustache makes a difference!

While Terry ran 42 km a day, we took it in smaller steps and ran either 5km or 2.5km around Ring Road to parade his cause. Doing



Alison Lee

Some of the participants of this year's Terry Fox Run hosted by EngSoc.



movember.com

The official Movember moustache guide. Which one will you grow?

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TERRA FIRMA

The GEOs Go To Bancroft

**CAILIN HILLIER AND
NATALIA SKOMOROWKI**
2B GEOLOGICAL

On the weekend of October 16th, the current Mineralogy class ventured to Bancroft. This included a bunch of wacky GeoEng students, as well as boppin' Earth Science kids. The three day trip to look at rock outcrops, old mines, logging chutes, and cave systems was an amazing learning experience, not to mention a huge bonding weekend for the small but mighty Geo class.

The 39 students piled into 6 vans, leaving bright and early on Friday morning to head off into the wild. On route, we drove past a very large geologic feature that many of you have seen but never noticed. Just outside of Waterloo, right underneath the Schneider's sign, is a drumlin, showing evidence of the glacial past of this area. As we continued on our way we stopped in Havelock to observe nepheline syanite and a giant turkey-hay bale. After that, we really started to get into the wilderness and had multiple opportunities to observe large roadside outcrops.

Having the chance to finally observe what we were learning in class all these years was one of the best opportunities we could possibly be offered. It is one thing to read about pegmatites and look at colourless pictures in text books, but actually seeing massive 40 foot rock formations up close is a wonder to behold. For those who were questioning our program or losing their

love of rocks, this was a trip that sparked that interest once again.

After long climbs over outcrops, taking many pictures of gorgeous rocks, and sitting in vans, we finally arrived at our cottages. Now, for those of you in any regular engineering class, you get to spend time with your classmates every day. For us Geos though, we are always mixed in with Enviros or Earth Sci kids. Now was our chance for a class bonding experience. Nine Geo Engs fit into a cabin meant for four. Alcohol consumption, sauna good times, and jumping in and out of a partially ice covered lake was the best class experience one could ask for. And of course, our cabin was quickly deemed the party cabin, because, let's face it, the engineers know how to party. This was also an amazing chance to meet the wonderful Earth Science kids who we have to give props to for their stellar flip cup skills. Geo Eng loves Earth Sci!

The following day dawned bright and early, with questionable food and many, many headaches all around. We had a huge day of rock hammering ahead of us and it was a blast. One particular site was that of an abandoned feldspar mine. It was a series of gorgeous pink caves, accented with sparkling, smoky quartz. The quartz was actually smoky due to the trace elements of uranium and thalium throughout; we used a Geiger counter and recognized the high radioactivity present.

Another highlight of the trip was the Eagle's Nest Lookout that offered picturesque views of

Bancroft.

From there, we traveled to Eagan's Chute, the site of an old logging river. Here, we traveled across an ice covered pond, walked a long trail, and arrived at a waterfall. We got as close as possible to

get a clear view, while trying to be safe and not get swept away into the rapids. We all thought this was a beautiful location and truly enjoyed climbing over the rocks in this area.

The entirety of the trip was phenomenal. There were many more sites that we visited that were truly a wonder to behold. The uncommonities, migmatite sights, and frequent occurrence of fluorrichterite crystals will stay in our memories for years to come. What a great way to learn.



Natalia Skomorowki

The Geological 2012 class pose for a picture in the wilderness of Bancroft, Ontario.

We would definite classify this trip as a highlight of our university lives. A huge thank you goes out to Katherine La Hay, Lisa Atkinson and most importantly, our haranguing-loving professor, Tom Edwards. His enthusiasm was contagious and his constant commentary of the trip via walkie-talkie made us all excited to be there. We can now identify marble, limestone, pegmatites, and intrusive mafic bodies while traveling at 100km/h: a true accomplishment.

Sparkly Times at the Mineral and Gem Show



CAILIN HILLIER
2B GEOLOGICAL

The annual Earth Science Mineral and Gem Show took place once again, on the weekend of October 24th and 25th. It was a main part of the University of Waterloo Science Open House, held in the Earth Science Museum. This year's theme was fossils and minerals of Ontario. The show was truly a wonder to behold for all who attended, which included curious students, faculty members, families from the surrounding area, and industry experts. It offered a large variety of interesting educational demonstrations, products, and table upon table full of stunning samples.

Upon entering the Mineral and Gem Show,

you could enter yourself in a door prize draw, awarded hourly on both days. There was also an area set up where people could examine and collect free samples, donated by the Kitchener-Waterloo Gem and Mineral Club. Demonstrations around the Earth Science Museum included small scale fossil digs, rock and mineral identification stations, and gold panning. The educational group, Mining Matters, was also present. Their goal is to inform the public on the uses and importance of mining in Canada, and to show that the mining industry is being environmentally conscious. They had a booth set up where young children could match mining site photos with their current photo, showing quarries reclaimed and turned into parks, and tailings ponds restored to healthy fields. Examples of products made from mined materials were shown, such as gold for electronics and nepheline syanite in Oreos and porcelain.

The mineral and gem dealers had many tables set up around the two main floors of EIT. Raw rock and mineral samples were displayed alongside their polished equivalents. Several tables had their own geode crackers that would crack open a normal-looking, coconut-sized rock to reveal the crystals within. The products for purchase that were on display were spectacular. Jewellery, coasters, clocks, lamps, book ends, gem-encrusted tree sculptures and paintings, soapstone carvings, and candles made out of minerals and gems were truly beautiful and displayed with extreme creativity.

Several particularly impressive rock samples on display included perfect, cubic pyrite crystals, sparkly blue azurite samples, rather large copper formations, amber and, my personal favourite, galena. A vender that frequently supplies samples to the Earth Science Department had amazing examples of ulexite, also known

as TV stone. This rock has fibre optic properties which allows for a rock side to display whatever surface is adjacent to its other side. Google or YouTube ulexite to see for yourself, it is really neat! Another interesting find were dinosaur eggshell pieces from Argentina. Since these pieces were exported in 1996, a law forbidding the export of this archaeological wonder has been established.

A fluorescence exhibit offered a ton of information on the study of fluorescent minerals. Did you know that only 30% of all minerals are fluorescent, and of those, only 10% are worth collecting? The Canadian Shield offers the best fluorescing minerals in the world, including calcite, sodalite, and more. The Mineral and Gem Show was a learning experience for people of all ages. If you missed it this time around, be sure to check it out next year in EIT on November 6th and 7th.

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- *Power Supply Design*
- *Wireless Communication System Design*

Lighting the Torch

The Olympics Make the News

KATE HEYMANS
1A CHEMICAL

The Olympics have made the news lately; earlier this month Rio de Janeiro was awarded the 2016 games after long discussions, soon thereafter the Olympic torch was lit in Olympia and just last week the Olympic torch was handed over to Canadians to finally begin its long relay throughout Canada. So here's a quick summary of all the important (and latest) info:

In Rio, absolute euphoria followed the International Olympics decision to award the games to the South American city however in other places people were very disappointed. The decision was thought to have been unexpected as Rio was not amongst the favourites for the games and the Olympics have never been held in South America before, however the joy and celebration it sponsored suggested that the city was ready to play host to the big event. Other disappointed contenders include the Obama's home town, Chicago, Madrid, and Tokyo. Tidbits of juicy gossip; it's rumoured that Obama's short visit in front of the IOC made a bad impression simply because it was insultingly short, many still doubt that Rio will be able to assure the level of security needed for the games as the city is still plagued with gang wars.

The lighting of the Olympic torch is always a huge ceremony and was followed with all the

pomp as usual. The flame is started by concentrating the rays of the sun using a parabolic mirror. Although the Olympic torch has no historical equivalent in the ancient games, today it carries a great importance. The lighting of the torch is supposed to signify the beginning of the preparation for the Olympics and hence the period of time during which peace is supposed to be maintained. It's a pity this symbol isn't more respected. After the flame is lit it is carried to the temple of Hera in Olympia where the Olympic runners begin the great relay. Random facts: the cloudy weather on Thursday morning in Greece allowed people to doubt that the torch would successfully be lit using the sun's rays, despite the really hot temperatures in Greece the first Greek runner was wearing a toque in reference to the location of this year's games - Canada!

The flame was entrusted to Canadian officials last Thursday and finally arrived in Victoria on Friday. The first part of the relay was started by a trio of First Nations Canoes. Although this year the torch will not be carried all around the world it will complete the longest ever domestic relay. By the end of the relay the torch will have traveled for 106 days and covered 45 thousand kilometers. A bit of news closer to home: the torch will unfortunately only be passing through



The runners of the first leg of the marathon pose with the flame at Elk Lake in Victoria, B.C. before beginning the 106 day journey.

the Kitchener-Waterloo area on December 28 during the Winter Break; no athletes from the Waterloo area will be competing in these games.

Hopefully all will go well for this year's Olympic games, as the focus of the world's attention turns to Canada. Good-luck to all the participants!

For more information: vancouver2010.com

Major Flame Stops

Montreal: Decemeber 10th
Ottawa: December 12th-14th
Toronto: Decemeber 17th-18th
Mississauga: Decemeber 19th
Kitchener- December 27 & 29th
Winnipeg: January 5th & 7th
For more: Check out vancouver2010.com

Math 3 Ground Breaking Draws a Crowd

But Not as Big as the Crowd for the E6 Groundbreaking



YOUSIF AL-KHDER
2T MANAGEMENT

More than 2 weeks ago, on October 16, the Faculty of Mathematics celebrated the groundbreaking of a new building, which is being named Math 3. The new 4-story building will be home of the depart-

ment of Statistics and Actuarial Science. Similarly to E6, Math 3 is being partly financed by the federal government through the Knowledge Infrastructure Program.

Some of the important figures who attended the ceremony included President David Johnston, Tom Coleman who is Dean of the Faculty of Mathematics, Peter Braid who is an MP for K-W, and John Milloy who is an MPP for Kitchener-Centre and the Minister of Training,

Colleges, and Universities. Dean Tom Coleman started the ceremony with a bit of humour, as he assured the crowd that Math 3 will have a sufficient amount of natural light and washrooms, a welcome change from the MC and DC buildings. On a more serious note, Minister Milloy talked about the importance of this new building with respect to how it will allow for the expansion of the faculty's research capacity. Furthermore, the building will

provide additional space for graduate students.

The building will provide approximately 90,000 square feet of space, which is about one third of the space that MC currently offers. A UW news release stated that, "the new facility will enable expansion for all academic units within the faculty of mathematics." The building is scheduled to be completed for March 2011.



Yousif Al-Khder

A large number of dignitaries showed up for the groundbreaking of Math 3, located north of MC. (From Left) John Milloy, MPP for Kitchener-Centre, William Sellier, former MathSoc President, Tom Coleman, Dean of the Faculty of Mathematics, Peter Braid MP for K-W, and David Johnston, UW President.

PDENG INDEPENDENT REVIEW

With the release of the PDEng Independent Review, *The Iron Warrior* contacted different stakeholder groups involved for their opinions and responses. Due to the short notice and midterms, not everyone was able to meet our publication deadline so expect further coverage in the next issue of *The Iron Warrior* out on November 18th, 2009.

Messages From the Dean

ADEL SEDRA
DEAN OF ENGINEERING

The following article was originally an e-mail sent by the Dean of Engineering to all undergraduate students on October 23rd, 2009.

The PDEng review, initiated in the spring of '08, has been completed by three independent reviewers and is now available for your information and commentary. We invite you to read through the report (<http://www.eng.uwaterloo.ca/~deansweb/Waterloo%20PDEng%20Final%20Review.pdf>) and then visit the Engineering Society website to access the on-line feedback tool (<http://engsoc.uwaterloo.ca/>). Information about the on-line feedback tool is posted on the EngSoc home page.

The review clearly identifies issues in the PDEng program that need to be addressed, and they will be. The external analysis confirms what we had heard from many of you and provides a good starting point for us to begin making improvements. While you and the reviewers acknowledge the value of the program's goals and exposure to professional skills, there are a number of concerns. We are grateful to the external review team for their

Fixing the problem areas is a priority which begins immediately. As promised, you will be involved in that process.

diligence, thoroughness and inclusive process.

Fixing the problem areas is a priority which begins immediately. As promised, you will be involved in that process. You asked for 6 weeks to review the report and get back to us with your comments and suggestions. Please share your thoughts by Friday, December 4, 2009.

The associate deans, department chairs and I will also discuss the report's recommendations over the coming weeks. We are committed to PDEng, an important part of what makes Waterloo Engineering stand out as the best - and most well-rounded program - in the country.

Thank you for your interest and for what I am sure will be innovative ideas for positive change.

We will keep you as informed as possible about next steps, timeline, and outcomes of this review.

Note: If you are on either society, and are unable to access the feedback tool, please send your comments to Cat Hay, EngSoc B President, bsoc_prez@engmail.uwaterloo.ca.

Sincerely,
Adel S. Sedra
Dean, Faculty of Engineering

ADEL SEDRA
DEAN OF ENGINEERING

The following article was originally an e-mail sent by the Dean of Engineering to all undergraduate students on October 30th, 2009.

We have taken the first step to address the issues identified in the PDEng Review Report.

I am putting together a task force that will start work immediately on determining what changes will be made, when, and how. We will move forward as quickly as possible as we continue to receive your feedback in the coming weeks. There is much to consider and we want to get it right. The goal is to ensure we provide the best professional development possible, an integrated part of your overall Engineering education.

The task force will have student representation.

PDEng is an essential component of the Waterloo Engineering curriculum and is here to stay. As many of you said during the review process, you believe in the program's purpose and goals. Leadership ability, communication

PDEng is an essential component of the ... curriculum and is here to stay.

skills, and other management capabilities are entry requirements for today's knowledge-based, global workplace. We know this, employers have told us they expect more from us, and we are committed to helping our students learn about these broader professional concepts. That said, we heard you and we know we must do better in *how* we deliver this experience.

For those of you currently enrolled or about to be enrolled in PDEng courses, it's business as usual. All PDEng courses and assignments must be completed on time as required. While we will work as quickly as we can, we will make changes in an orderly manner.

As I mentioned in my last e-mail, we will communicate on a regular basis throughout the process, electronically and face-to-face when possible. In the meantime, please continue to give your comments by completing the on-line feedback tool, which closes December 4. (<http://engsoc.uwaterloo.ca/>)

Sincerely,
Adel S. Sedra
Dean, Faculty of Engineering

From the Perspective of PDEng

CAROLYN MACGREGOR
DIRECTOR OF PDENG

I would like to start by extending my appreciation and thanks to Trevor Jenkins and the Iron Warrior Staff for allowing PDEng to provide a perspective on the Independent Review Report in our own words. Trevor's idea, which I think is a good one, is to set up a series of articles by PDEng to appear in the next few issues of the Iron Warrior. The PDEng Review process was commissioned by Dean Sedra and so he is in charge of how the process will proceed. My understanding is that the next step is for Dean Sedra to collect responses to the Independent Review Report from all of the stake holders (students, PDEng, Faculty of Engineering, CECS, Co-op Employers).

It is worth reminding ourselves that no one else, at any university anywhere, had tried to do what UW Engineering has tried with PDEng - take co-operative education to the next level through on-line technology during co-op work terms, and at the scale we have of approximately 2500 students per term. It has been an entrepreneurial enterprise for us all. If you consider what the first PDENG 15 course offering was like in Winter 2005, and compare it to where we are now, we have moved from a rough prototype to a beta version. Now we must have all of the stakeholders at

the design table to figure out how we capitalize on what we have learned over the first full development cycle. It isn't going to be an easy task with a quick solution, but we have the creativity and tenacity as a collective of stake holders to solve this "situation of concern".

I have been extremely fortunate to have had incredibly dedicated people work with me through some very challenging time. I am especially proud of our co-op student mentors who have been brave enough to accept the jobs knowing that they were likely to face the wrath of their colleagues. Without exception, they have come in with conviction to want to help from the inside; and have been committed to doing their best for their fellow students. They have my admiration as true community contributors.

I would like to express my utmost respect for all those students who took the time to be part of the review process by sending their thoughts to Dean Sedra as part of his call for submissions for the External Review group back in late Winter 2008. As a faculty member I have been incredibly impressed with the way the EngSoc representatives over the past 5 years who have been willing

No one else, at any university anywhere, had tried to do what UW Engineering has tried with PDEng - take co-operative education to the next level

to be at the table with PDEng. The various VP Education reps have been listening to student concerns, raising them at PDEng Steering Committee meetings, and offering constructive workable suggestions.

I would be remiss if I didn't openly express my appreciation to the External Review group for being willing to take on the incredible challenge of reviewing a program as unique as PDEng - one that has generated many polarized views and passionate opinions. Now that the External Review group has provided their written comments, I look forward to when the Dean will allow all stakeholders to read and reflect on the submissions of the others. My understanding from talking with the External Review group back in July is that we each might be

surprised at how much overlap there is in our assessment of the potential of the PDEng programme, and the realities we have all experienced as the PDEng programme was being built from scratch.

Like the students, the PDEng team received the Independent Review Report on Friday October 23, 2009. We all need time to carefully consider and reflect on the words of the External Review group that have been delivered to us. Dean

Sedra has requested that we all provide him with our responses to the Independent Review Report. This is an important step in the process as people external to our UW culture and our personal PDEng experiences will only be able to provide us with their impressions and perspectives collected over a short period of time. It is an important piece - that of the outside observer. The External Review group have put forward recommendations, but we need to reflect as a collective on what is doable and how we might creatively reach the goal of having a PDEng programme that is truly considered to be value-added in all of our UW Engineering programs.

Since I am a strong believer in doing your best to "walk your talk", I have asked the PDEng team to prepare an initial position statement as a more formal response to the Iron Warrior's request that we provide a response to the Independent Review Report. For students who have done PDENG 35 and beyond, the format will look familiar. For those in PDENG 15 and PDENG 25, you will get to know the basics of a position statement as you progress through the PDENG courses. Over the next few weeks and months, PDEng will update our position statement as the review process progresses. It will give us a chance to show students a real-world example of how position statements can be used.

Reviewers Make Recommendations

REVIEW COMPLETED from Page 1

connection with co-op employers and alumni mentors, curriculum, marking, resubmissions, markers, course evaluation, and a follow up review.

The PDEng independent review contains a brief overview of the PDEng Programme, the review mandate, the independent review process, a breakdown

of the documents that were reviewed, a summary of student conduct, a list of the interviews that were conducted, the response to the six aspects that the Dean mandated to be addressed, recommendations made by the external reviewers, and a conclusion.

A link to the PDEng Independent Review report can be found on the EngSoc home page (www.engsoc.uwaterloo.ca).

Students are encouraged to read the report and provide constructive feedback using the report feedback tool. A link to the review feedback tool is also on the EngSoc homepage. The feedback tool consists of a multiple choice survey and also provides an opportunity for students to make written comments. The feedback period is currently open, and will remain open until December 4th, 2009.

To give your feedback on the review go to engsoc.ca and fill out the survey.

PDEng Position Statement

CAROLYN MACGREGOR
DIRECTOR OF PDENG

Statement of Issue

The PDEng Programme urges all stakeholders to review and critically analyze the Independent Review Report submitted as part of the Faculty of Engineering PDENG Review process, encourages students to continue completing their PDENG courses offerings as this review process continues and remains strongly committed to supporting students as they complete the PDEng component of their core degree requirements.

Position Summary

The Faculty of Engineering has released the Independent Review Report of the Professional Development for Engineering Students (PDEng) Programme (2009). The PDEng Programme has consistently been supportive of the review process, and is encouraged that its own recommendations for improvement are generally reflected by the recommendations of the independent review. However, the Programme is concerned that when taken out of context, statements made in the report may encourage some students to disengage from their PDENG courses, and jeopardize the completion of their degree requirements. This lack of context may also hinder the formation of informed opinions about the Programme. The Programme has already taken a number of steps to begin to address concerns raised, will continue to actively engage in the review process currently underway, and will continue to support students in the completion of PDENG courses. The Programme will also encourage all parties impacted by the Programme and the review process to analyze and assess the independent review report, within the context of the broader review process.

What is the Issue?

On October 23rd, 2009 the Faculty of Engineering released the Independent Review Report of the Professional Development for Engineering Students (PDEng) Programme. This report was submitted as a component of the Faculty of Engineering PDEng Review process commissioned by the Dean of Engineering, which began in Winter 2008 (Professional Development for Engineering Students Programme, 2009a, Section 2, p. 3). The PDEng Programme has consistently supported an independent review of PDENG course offerings, as soon as the full offering of PDENG courses had been implemented, in communications with Engineering Faculty, Staff and Students. The Director confirmed this support in an e-mail to members of the Academic Policy Committee and the Engineering Society (EngSoc) in May 2007. As such, the Independent Review Report and associated review process was welcomed by the PDEng Programme.

Given the above, it is not the Independent Review Report that presents a concern to the PDEng Programme, but rather, the lack of a companion document providing context to the report and its findings. The Programme's primary concern is that without appropriate background information about the process leading up to the drafting the report and the role the report will play in the review process moving forward, engineering undergraduate students may use some components of the report as justification for disengaging from PDENG course offerings and place their planned dates of graduation at risk. This concern is especially true of our first year engineering un-

dergraduate students who may be unfamiliar with both the PDEng Programme and the Faculty of Engineering PDENG Review Process. In addition, the public availability of the report increases the potential for third parties, who have not been engaged in the review process, to draw incorrect conclusions about the PDEng Programme and its stakeholders from the report.

Why is the Issue Important?

The quality of the PDEng Programme is of great importance to students, as evidenced by the extensive submission made to the Dean by the Engineering Society on behalf of students (Lipnicky, 2008). PDEng staff is aware of the impact that the programme has on students, eager to find ways of improving the programme, and welcomes the input of students and faculty, as well as the external review. This is seen in the critical self-study undertaken to improve the programme (Professional Development for Engineering Students Programme, 2009a, p. xiv). The Programme is encouraged to see that many of our own recommendations are reflected in the recommendations of the Independent Review Report, given that the PDEng Programme's own recommendations were influenced by extensive student feedback (Professional Development for Engineering Students Programme, 2009a, Appendix D).

Based upon the initial student responses to the Independent Review Report that have been received by the PDEng Programme, the PDEng Programme is concerned that not all engineering undergraduate students will remain engaged in their PDENG course offerings and keep on track with their desired graduation dates. A priority for the programme is to ensure that we are supporting our current students in meeting their graduation requirements.

The second concern of the PDEng Programme is that reading the Independent Review Report without knowledge of the review process may prevent individuals from arriving at fully informed opinions. The PDEng Self-Study was finalised in January 2009 after a year-long process of drafts, revisions and consultations with involved individuals and groups (Professional Development for Engineering Students Programme, 2009a, Section 2, p. 5), including input from students provided by the Engineering Society (Lipnicky, 2009). The Dean read an early draft of the self-study and requested further clarification in sections that were then revised prior to the final version of the PDEng Self-Study that was given to the external reviewers.

The 3 external reviewers were given the PDEng self-study prior to their campus visit, and they received a copy of the Student Report Submission to the Professional Development for Engineering Students (PDEng) Programme independent review (Lipnicky, 2008) upon their arrival to campus (Aboulnasr, Freeman, & Hamacher, 2009, p. 18). It is our understanding that the External Review group first received a copy of the Student Report during their meeting with student representatives on 07 July, 2009. This information helps illustrate two important points: (1) The reports submitted from the PDEng Programme and the Engineering Society were based

on data that was over a year old by the time it was received and reviewed by the external reviewers, and (2) The external reviewers did not have an opportunity to review the student report prior to their arrival on campus. Given the potential impact of, at a minimum, these two points on the process leading up to the drafting of the Independent Review Report, the PDEng Programme suggests that all impacted stakeholders should critically evaluate both the report of the external reviewers and all related documents (such as the self-study and student submissions).

What has the PDEng Programme done to date?

While the Independent Review Report and its associated recommendations were only recently released, the PDEng Programme has taken a number of steps toward improving course offerings, given the findings of its own internal self study and consideration of student feedback regarding the programme.

As a response to feedback and concerns in early academic terms of the PDEng Programme, the resubmission process was implemented to provide students with adequate opportunity to "help students strengthen areas of weakness and as a means to provide another opportunity to demonstrate their ability to develop their skills." (Professional Development for Engineering Students Programme, 2009c, p. 52) In more recent

...one might wonder why the PDEng department is not immediately implementing the recommendations.. the PDEng Programme needs to wait for the final outcome of the review process to know which recommendations the Faculty of Engineering wishes the programme to implement...

academic terms, the Programme has responded to student concerns regarding the lack of flexibility in due dates through the implementation of "Grace Days" for late assignment submissions and modified Request for Accommodation processes. Given the number of students enrolled in PDENG courses and the associated variability in time zones and work schedules, the PDEng Programme continues to monitor the need for flexibility to assignment submission dates.

Since the return of the Director of PDEng from sabbatical in January 2009, there has been a shift towards greater holistic marking of PDENG course assignments. This marking method takes into consideration all opportunities within individual assignment that a particular skill can be demonstrated, rather than limiting assessment of a skill to the particular question or component of a submission designed specifically to allow for demonstration of the skill. This marking approach complements the already existing practice of course instructors to examine how skills are demonstrated across all assignments within a course when considering whether or not a student has earned credit in a PDEng course. The adoption of a recognized holistic marking structure is also a part of long-term process of embedding more links to past and future courses in course assignments, to allow for greater transparency and context to the skills being assessed.

What actions are being proposed by the PDEng Programme Moving Forward?

In light of the release of the external review, one might wonder why the PDEng department is not immediately implementing the recommendations outlined in the Independent Review Report. There are two reasons why this will not

be the programme's immediate focus: (1) The external review is but one component in the Dean's review process, as mentioned above, and (2) as the PDENG Review process under the Dean of Engineering's purview by the Dean of Engineering, the PDEng Programme needs to wait for the final outcome of the review process to know which recommendations the Faculty of Engineering wishes the programme to implement and what additional stakeholders will be assisting the programme with these efforts.

While the review process continues and in light of the concerns previously expressed, the PDEng Programme will be implementing the following interim courses of action:

1) PDEng staff will continue to support students in the successful completion of their PDENG courses so that they can work toward meeting their degree requirements while continuing to develop their professional skills.

2) PDEng staff will encourage all affected stakeholders to critically review the Independent Review Report and assess the basis of the recommendations presented. We will provide this encouragement through the use of appropriate media, such as emails and student publications, and in consultation with the Dean provide an executive summary of the 380-page PDEng Self-Study (Professional Development for Engineering Students Programme, 2009a)

3) PDEng will continue to participate in and support the review process that is currently being conducted by the Dean of Engineering, as PDEng is eager to move forward on any recommendations that will benefit our students.

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ENGINEERING SOCIETY EXECUTIVE REPORTS

Presidential Report



CAT HAY
PRESIDENT

Congratulations – midterm season is mostly over! We've got lots of events coming your way in November, so keep watching the whiteboard outside the EngSoc office for the latest info.

A reminder that you can self-report influenza-like illnesses through Quest. More information about influenza updates and self-reporting guidelines are available on the Registrar's website (registrar.uwaterloo.ca). Pay special attention to the timelines within which you must report illness.

In mid-October we had a meeting of the Council of Presidents, which brings together Presidents from faculty and residence societies across campus. We discussed FEDS marketing, resources we can take advantage of as a student society (like SLC bookings and poster design), the upcoming winter elections,

the One Waterloo campaign, society finances, and the upcoming referendums. The referendums will take place Nov 9 – check out vote.feds.ca for more info!

At the last EngSoc council meeting, we saw the presentations for P&P nominations. The following students were nominated on B-Soc: Anna Lafoyianis, Cat Hay, Dave Halford, Dustin Verhoeve, Eric McKay, Graeme Williams, Jeff Strange, Katherine Olsen, Mark Cremasco, Paul Jakubowski, Paul Nogas, Ryan Wheeler, Sasha Avrelina, and Scott Hooker. Awards will be presented at GradBall in March.

We also had a meeting of the Sandford Flemming Foundation board of directors where we discussed the Waterloo Engineering Competition (debates and design competition), the upcoming Ontario Engineering Competition that will be held at UW in January (see oec2010.uwaterloo.ca), and the implementation of a new Memorial award as well as potential changes to the John Fischer leadership award. More information about these awards should come out in

the winter term.

At the latest ESSCO President's teleconference, we talked about having a "worst moustache in Ontario" competition as part of the fundraising for Movember (<http://ca.movember.com/register/5923>). Stay tuned for more details.

We are also looking for volunteers who are passionate about promoting engineering to elementary and high school kids to mentor Grade 4-9 students participating in the FIRST Lego League competition. If you are interested in volunteering, please contact Kevin Yeung, the B-Soc Outreach Rep.

You should have all received information about the PDEng Review Report which was released Nov 23. The report is 19 pages (if you're short on time, we recommend you pay particular attention to pages 12-19) and there is a feedback tool on the EngSoc website for you to provide your comments about the review (whether the process was fair to students, how much you agree with the recommendations, etc).

If you are having technical problems using the feedback tool, you can send your feedback to me at: bsoc_prez@engmail.uwaterloo.ca

Applications and nominations for the President's Circle Awards (leadership and volunteerism) are being accepted until Nov 13 (pca.uwaterloo.ca).

The following events are coming up in the next couple weeks: QPR suicide prevention workshop (Nov 4 @ 11:30-1 MC 4068), Fall open house (Nov 7), Examinations & Promotions committee meetings (Nov 9 & 10), an Orientation Review committee meeting (Nov 11), the Sandford Flemming Foundation AGM (Nov 12), and Student Awards Dinner (Nov 12).

Nominations are open for EngSoc Executive & WEEF Director positions from Nov 2-9. Campaigning will happen Nov 11-20, and the actual election will happen online Nov 21-24. Drop by the EngSoc office (CPH 1327) to pick up nomination forms, and stay tuned for more info about the candidates and election procedures.

How Stressed Are You? We Want to Know!

MARY VILORIA
ESSCO VP DEVELOPMENT

When you are stressed, new information doesn't get stored in the memory part of your brain, but is stored in the hypothalamus; your emotions. As students we are subject to stress and studying something as rigorous as engineering, doesn't make it any better. The Lobbying Issues and Action Committee (LIAC), part of the Engineering Student Societies' Council of Ontario (ESSCO), is studying the causes of stress of engineering undergraduate students and the effects it has.

From first year on, the number of people in your class drops because of what engineering demands of you. Schools have resources available to help students cope with what they face during their studies, but are they enough, do they cover everything, do they just deal with academics? There is a wide range of causes of stress, from the number of assignments to simply not getting it and the measures people take to deal with it can range from drinking to dropping out and in some cases, mental health issues, which is why this topic is so im-

portant and why we are researching it. We want to see how stressed you are during the school year, try to pinpoint the causes of it and see what we can do to help.

Help us by filling out our survey about stress before the end of December, using this link: <http://www.zoomerang.com/Survey/survey.zgi?p=WEB229PA2YGL7N>. Fill out the survey and get entered into a draw to win a Canon SD1200 IS digital camera! The results of the survey will be kept anonymous, however, to be eligible for the draw, you MUST provide your school email address. The results and our recommendations will be used for a report that will be presented to the Professional Engineers Ontario, the Ontario Society of Professional Engineers, the Council of Ontario Deans of Engineering, and other associations that can help initiate change within our province. Fill out the survey and help us make a change.



VPF Report



SCOTT RANKIN
VP FINANCE

Good morning everyone, So the milk flasks have been ordered they should be here soon, so keep a look out for them in Novelties.

That's pretty much the only financial thing I need to announce as of now. I've been keeping a very tight budget this term and making sure everyone is using what they asked, and if they haven't, I have been reallocating the budgeted money elsewhere.

Also if you notice I have been able to make all ticket sales free. However, since people are purchasing free tickets

this has resulted in students not caring enough to go to the event after they have grabbed a ticket, in other words they are thinking "Well it was free so it's not a big deal if I don't go." This is a problem since there are many students who would like to go but are unable to since the event has sold out. Therefore if you purchase a ticket that was free and have no intention of going, please give your ticket back to the orifice so that other students may have a chance to go. Some directors may ask for a deposit on their event to make sure that this does not happen.

Thanks,
Scott

PS: I'll have another random story next issue. I just didn't have time/creativity this week.

VPX Report



CARA KENNEDY
VP EXTERNAL

Midterms are over!! Wooohoo! So what's been happening with External Relations?

Well, ESSCO is looking for authors and articles for their "Engineers Rule the World Publication" to send to high school students across Ontario. Over 6 high schools have subscribed to this publication already and if you are interested you can write an article from 250 - 500 words about the accomplishments of a famous engineer. E-mail the director, Ryan Farrugia at ryan.farrugia@mycampus.uoit.ca for more details!

The charities directors just ran a successful Terry Fox Run and raised \$465 for cancer research! Up-and-coming is the Movember campaign where men can grow a moustache for the month of November and raise money and awareness for Prostate Cancer. See <http://ca.movember.com/register/5923> for registration details and recruit a ladies appreciation group to join you in your fundraising adventure. Also, keep your eyes out for the Charities Pancake

Breakfast, see the events page on the EngSoc website for breakfast mornings.

I also want to send a big thank you to Nikki Weckman for organizing the Big External Event where she successfully hosted an evening full of information and food. We had CFES, ESSCO, PEO, OSPE and EWB present for the night to showcase what their organization does and then a catered dinner followed.

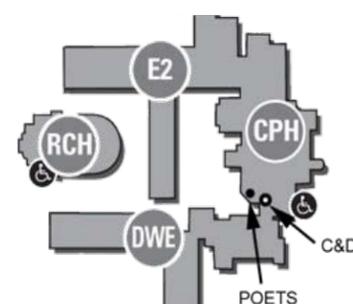
Wheelchair Basketball is coming up on November 8th! Check out the website or e-mail Paul (pjakubow@engmail.uwaterloo.ca) or Jon (j2warren@engmail.uwaterloo.ca) for more details!

That's all folks,
Cara

MORE THAN JUST COFFEE & DONUTS

The EngSoc C&D has more than just Coffee and Donuts. Stop by for a variety of freshly prepared sandwiches, baked goods, soups, and more! It is run by students for students, so the prices can't be beat!

There are a variety of specialty coffees available - including fair trade. Bring your own mug to help the environment too!



HOURS OF OPERATION
MONDAY-THURSDAY 7:30AM - 7:00 PM
FRIDAY 7:30 AM - 5:00 PM

ENGINEERING
SOCIETY



Senator's Report



JAY SHAH
ENGINEERING
SENATOR

At the last senate meeting (Oct 19th), the Registrar's office brought a motion to senate that would allow for the academic calendar dates to be set in such a way that classes could occur on the Thursday and Friday of Orientation Week. This paves the way for a shortened frosh week for years to come.

After much discussion, the student senators decided to ask senate to defer the motion until the November meeting (Nov. 16th) to allow for more time in collecting facts and opinion. Senate voted for the deferral thereby agreeing to push the motion back by one month. Hurray!

The biggest concern is the lack of rationale for proceeding with such a drastic change to the structure of Orientation Week. The memo regarding the motion simply says "An earlier start to the fall term every year has benefits that the University should consider." What specifically these benefits are have not been clearly communicated.

In addition, the Orientation Review Committee that was tasked with analyzing an alternate Orientation Week schedule has stated that a shortened orienta-

tion could be possible but have yet to finalize their report that would include a logistical plan of how a shortened week would actually occur. Without this, we are assuming that a shortened week would work logistically, but we don't know for sure.

The student senators are currently investigating the history, rationale, and soliciting opinion from students regarding this matter in preparation for the Nov. Senate Meeting. As a show of support, if you feel strongly about the shortening of Orientation week, I invite you to attend the Nov. Senate meeting as a spectator in protest. (Nov 16th, 4:00pm, NH3001) I also invite you to email me (senate@engmail) with your opinion on the matter.

On an unrelated note, the 2009 Annual Performance Indicators Report is now available. (<http://analysis.uwaterloo.ca/docs/pi.php>) It contains some really interesting data about the University. Did you know on average, arts co-op students make \$300 more per term than engineering co-ops? Did you know that 48.1% of all University operating money comes from grants? Did you know that the student to faculty ratio is 27.1 to 1? All this and SO much more can be found in the Performance Indicators Report. Check it out =>!

You can always reach me at senate@engmail. Be proactive towards what you care about!

WEEF Report



MATTHEW BESTER
WEEF DIRECTOR

Hello everyone, get ready to be informed!

WEEF Proposals have been submitted and the deadline has now past. There will be three funding council meetings on Thursday November 5th, Tuesday November 10th, and Thursday November 12th. If you have submitted a proposal you should have heard back from me by now. Likewise, if you are on the funding council you also should have been contacted by me. If not, contact me ASAP at weef@engmail.

WEEF returns have also concluded. If you requested your return you can expect a check mailed to your address listed in quest-

on the 10th week. If you didn't receive your check by the end of the term please consider these next few things:

a) Sometimes your WEEF return is lumped with other things you may be getting reimbursed for.

b) If you owe money in quest, your WEEF return is deducted from your balance owing, i.e. you will not receive an actual check, just a credit in quest.

If you have not received your refund and the above two do not apply to you please contact me at the address above.

For those of you who decided not to get your return, keep on rocking! You will receive a donation receipt sometime to claim towards taxes.

I'll make one of those flashy graphs for a future IW this term as soon as I get the data from Finance.

You stay classy engineering!

VPed Report



SASHA AVRELINA
VP EDUCATION

The biggest news of the last three weeks is the arrival of the PDENG Independent Review report. The full version of the report is now available online at <http://www.dean.eng.uwaterloo.ca/Waterloo%20PDENG%20Final%20Review.pdf>. The next step of the review process will involve giving students some time in order to read through the review as well as taking in student's comments. This process will take six weeks and will be completed on December 4, 2009 and during that time faculty and staff will also be given a chance to provide some feedback about the review. In order to simplify the process of gathering feedback we have set-up an on-line feedback survey available through the homepage of www.engsoc.uwaterloo.ca. The tool is open to any undergraduate students; however, in order to ensure a valid number of responses, students are required to login in order to provide feedback. Rest assured we will not be collecting any of the login information and associating any the comments with them - all of the results and comments will be provided to the Dean in anonymous form. I would love to see all of the students provide feedback using this tool - it shouldn't take you that long.

The report itself is only 19 pages (with 7 of them being findings and recommendations) and the survey should take about 15 minutes to complete. Finally, the survey is very flexible and you would have a chance to give additional comments on any of the responses you provide in case you feel that simply picking an answer from the drop box was not sufficient. There is also space for general comments at the end.

As far as co-op is concerned the employment statistics for the fall 2009 term employment ended up being 97.8% overall and 97% in first year, with 46 of the jobs being volunteer jobs. For anyone needing help with resumes, we will be hosting a few more resume critiquing sessions later on this fall.

Upon receiving a lot of questions about the recent increases in the co-op fee, your co-op rep (Blair Rogers) wrote an article in this issue giving an official explanation from CECS - so please look for his article in this issue of the Iron Warrior. We also learned that you guys have a lot of follow up questions. We have set up a forum on November 10, 2009 at 5:30PM in CPH2387 for anyone to voice their concerns.

Finally course critique stuffing party will be on November 9, 2009 in CPH3607 at 5:30PM. Come help stuff those course critique packages and receive some free food!

Hope you guys have a good November, let me know if you have any questions - bsoc_vpedu@engmail.uwaterloo.ca

VP Internal Report



LAURA SISSON
VP INTERNAL

Midterms are over!!!!
It's time to start having fun again! November is going to be a jam-packed awesome time so get geared up for a good time. Just to give you a sampling of some of the internal events that are happening within the next 2 weeks:
-The 2012's are having a bonfire on Thursday Nov. 5th
-Wheelchair basketball is going to be rolling Sunday Nov. 8th from 11-1 in the PAC small gym.
-A rock band competition will be taking place on Nov. 9th and Nov. 12th in POETS at 7pm both nights
-Genius Bowl is on the 11th so get your trivia

team ready!
And then next weekend hits and all hell breaks loose:
-The 2011's will be having a Andre in POETS on Friday Nov. 13th
-There will be a Pubgolf event taking place the evening of Nov. 13th
-The curling bonspiel is happening all day Sat. Nov 14th
-Eng/AHS Semi-formal is the evening of the 14th. Dance tickets are \$10 and it starts at 8:00-8:30.
There is also going to be a band wars on Nov. 16th so start practicing now and getting a band together!
If you want to see some of the other events we're hosting, check the EngSoc calendar and if you have any questions about any of these events or if you'd like more information feel free to send me a quick email at bsoc_vpint@engmail.uwaterloo.ca.

Next EngSoc Meeting: Wednesday November 4th at 5:30pm in CPH 3604.

| Upcoming Events Calendar | | | | | | | |
|--|---|--|---|--|---|---|--|
| Monday November 2 | Tuesday November 3 | Wednesday November 4 | Thursday November 5 | Friday November 6 | Saturday November 7 | Sunday November 8 | Check out up-to-the-day event postings on the EngSoc website at engsoc.uwaterloo.ca |
| Charity Pancake Breakfast Election Nominations | Election Nominations DDR Party | EngSoc Meeting #4 Iron Warrior #3 Out Election Nominations | 2012 Spirit Bonfire Election Nominations | Waterloo Engineering Competition London GradComm Pubcrawl Election Nominations | Waterloo Engineering Competition Election Nominations | Election Nominations Charity Wheelchair Basketball | |
| Monday November 9 | Tuesday November 10 | Wednesday November 11 | Thursday November 12 | Friday November 13 | Saturday November 14 | Sunday November 15 | |
| Election Nominations Close Rock Band Competition | Election Nominations Rock Band Competition | Genius Bowl Election Campaigning | Rock Band Competition Election Campaigning | 2011 Andre IW Submissions Deadline (6pm) Election Campaigning | Curling Bonspiel ENG/AHS Semi-formal Election Campaigning | Election Campaigning | |
| Monday November 16 | Tuesday November 17 | Wednesday November 18 | Thursday November 19 | Friday November 20 | Saturday November 21 | Sunday November 22 |   |
| Charity Pancake Breakfast Band Wars Election Campaigning | Election Campaigning | EngSoc Meeting \$5 Iron Warrior #4 Out Pick-Up Hockey Game Election Campaigning | Enginuity Election Campaigning | Election Campaigning | Exec Elections Santa Claus Parade Yoga/Stretching Class | Exec Elections | |

POINT VS. COUNTERPOINT

POINT

Should PDEng Be a Learning-Based Course?

COUNTERPOINT

ANGELO ALAIMO
2B ELECTRICAL

I'm sure most of the people reading this article already know the PDEng Independent review has recently been made public. The review was commissioned by Dean Adel Sedra, who mandated the external reviewers to address six aspects of the program in the review. These six aspects were: programme objective, curriculum content, programme delivery, programme administration, relationship to the other aspects of the Engineering curriculum, and additional opportunities that can be realized through the PDEng Programme. After examining these six aspects of the programme, the external reviewers presented six recommendations to improve the program.

One of those six recommendations made by the external reviewers pertained to the curriculum. This recommendation stated, "Only about half of the students who answered the Student Survey in 2008 understood the PDEng Programme is intended to assess skills without instruction. This should cause the Faculty to seriously re-examine the structure of the curriculum as basically a skills assessment exercise and to incorporate a learning aspect that is more effective than the current resubmission process which follows the original submission too closely to allow for any true improvement in skills." I fully agree with the external reviewers' comment as I believe that if the objective of PDEng courses shifts from assessment based to learning based, bitterness towards the programme would decrease while the value of the programme to students and employers would increase.

Based on my own experiences completing PDEng courses, I have found some assignments are focused on simply assessing skills, while others are focused on learning a new skill. For example, I feel that writing PDEng 15 assignments on academic integrity, meeting specifications and planning for personal development are purely assessment based as these assignments are largely reflection based and do not require students to learn a new skill. I find myself feeling bitter when doing such assignments because I spend several hours to demonstrate competence, and after completion, I find myself no wiser than

before I started. In contrast, I feel the needs assessment and defensible decision making process taught in PDEng 25 was learning based, as I had to carefully read and understand the course content in order to complete the assignment. I had a much better attitude when working on such assignments because I am learning a new practical skill. Saying the above, if PDEng assignments shifted to learning based, I believe students would find the programme more stimulating as it allows one to grow, not just regurgitate already-known information.

Furthermore, as it is already well known, if one does not meet the requirements of a major assignment's marking criteria and are assigned a grade below competent, one will have the chance to resubmit the assignment. Comments are given by mentors in specific areas needing improvement. While I believe the comments allow one to fix their assignment quicker, I question its value as it allows one to complete the initial submission with little effort, and then fix the problem areas clearly mapped out by their mentor upon return. What is this teaching students? It's teaching them to complete work with little effort, have it checked by someone, and fix it per their comments. How would this fly in the real work? I for one would not to have someone constantly producing poor-quality work waiting for my input to make it better. That would be me doing their job! With a learning based PDEng module, one could complete a test, perhaps of a situational nature to gain credit for PDEng course.

In summation, if PDEng were to be changed to a learning based course, I believe students would find the course more interesting as one would be learning rather than trying to verbalise information already known. I also believe a learning based course would be more beneficial for both students and employers as it would help students to develop new skills. In addition it would teach students how to learn independently and apply the learned knowledge, a skill that would be of value in the workplace.

Regardless of how one feels about this issue, I encourage all to express their opinions by providing feedback on the PDEng independent review using the online feedback tool that can be found on the EngSoc website.

TREVOR JENKINS
2A MANAGEMENT

PDEng should remain as an assessment based course. All the skills that are assessed in the program are based off things that are common sense for most students: how hard is it to put yourself in someone else's shoes and defending their opinion with actual evidence? Neither of these things are any different than what we all had to do in any high school english essay.

Many have complained that the current assessment based systems lacks guidance and doesn't teach the skills necessary to complete an assignment. Since the entire point of an assessment based system is to assess what you already know, this shouldn't come as a surprise.

If PDEng were to become a learning based online course, it would basically just become another .5 credit course- no different than anything you take during a school term. You know how much more work you'd need to complete? Think about what it would be like to have to read or have someone explain to us how to think in someone else's shoes or how to analyze diversity within the workplace. While I'm not against the argument that there should be better explanations about certain aspects of the course, such as position statement writing and decision making tables, the idea that it should be solely teaching based scares me. If they actually attempted to teach us every aspect of those things, whether through online videos or audio files, then I would fail to see any point to the existence of PDEng.

As seen in the review, and as most people can probably agree, writing is not something engineering students enjoy doing. I never considered myself to be a good writer before joining The Iron Warrior. Through my last 3.5 terms here, and having read literally hundreds of articles submitted by students, faculty and alumni, I can honestly say a surprising number of individuals who submit articles need serious work on their writing skills. Most fail to understand such ba-

sic things as what a proper noun is, how to use connecting words, or even something as simple as how to use a comma. Something as simple as writing, like any physical sport or science problem, can only be learned and improved upon by doing it over again and getting feedback. If PDEng was to take a course based approach to teaching, the majority of what they'd be able to assess would only be simple application of the skills taught. While this might be adequate for an arts-course, engineers need to not only know how to apply skills in the most basic situation, but also to retrieve the skills they've learned in the past and know when to apply them to a certain situation. This goes deeper than just constant regurgitation of knowledge that occurs in a learning-based course. As a result, a skills based approach is the only real way to be able to fully analyze what an individual actually knows, and see if they're capable enough of applying those skills across an array of situations.

One major issue with a learning-based system is that evaluation of skills learned is simply getting a score over the minimum passing mark and then not really caring. Most of us who have taken a CSE in some introductory arts course have been guilty of doing this (*cough* PSYCH 101 *cough*). By being able to assess skills, students are able to learn from their mistakes and mentors are able to help guide them as to where they need to approve. Such individualized assessment is pure ecstasy compared to our typical course.

Editor's Note:

Point Vs. Counterpoint is a feature meant to stimulate discussion on thought-provoking topics. The views and opinions expressed here do not necessarily reflect those of the authors, *The Iron Warrior*, or the Engineering Society.

Why You Should Not Not Do Education Stuff

(The double negative means you should)

ALEXANDER
HOGEVEEN RUTTER
2B ELECTRICAL

This term's Sanford Fleming Debate "Finals" were held Friday, October 16th, in the CPH foyer at lunch. I say "finals," as there were only two teams to enter the debates in the first place. Lack of participation seems to be an unfortunate theme I've encountered far too often, and I'd like to debunk a few reasons it seems people don't seem to participate in competitions and volunteer for events.

Awareness-Directors do our best, but we're not perfect. It's possible you just don't hear about these things. I'm not sure this is the case for debating, as the posters were bright green and there were quite a few of those contact slips at the bottom taken away. Presumably people actually read these, and didn't just feed them to their pet turtle. However, there are three remedies if you feel you just don't know about events going on:

1. 2-week calendar right outside Office-check it every Monday to see what's upcoming-a lot of events can be entered

last-minute.

2. Online Calendar-<http://engsoc.uwaterloo.ca/events/calendar>, take a few minutes out of your stalking people on facebook budget to check this out instead.

3. Randomly wandering the halls of CPH and staring at walls for a few moments-some of the best events I've been to I found out about in this fashion. So next time you are between classes or have time to kill at lunch, give it a try.

Perceived Lack of Ability- Maybe you are not sure you have the skills to participate or volunteer. This is almost never true. For example, a perfect exam submitted to the exam bank is great, but a failed one can be very valuable as well. I'd like to think I'm not an awful debater but neither of the teams had any high school experience. Anyone with decent ability from high school probably would have beat us both. You don't have to be an expert to help critique resumes-in about half an hour we can train you to look for the most common errors and changes-your experience should do the rest. You don't need a grand thesis on how to reform PD Eng

to make a submission-everyone's voice is important in PD Eng submissions. This holds true for EngSoc forums and meetings, or volunteering when high school students come to see what engineering is all about. In short, it's usually effort, not expertise that's required.

Perceived Lack of Time- Everybody's busy, I get it. Before you eschew participating in other activities over EngSoc events, think of what an employer really cares about-10 percent higher on some midterm, or volunteering to make your community a better place. Pick a few nights to study, a few to party, one to rest, and you should have at least one left over! Cut one TV show out of your repertoire, spend an hour less wasting time on video games or sleeping. Have one less drink and wake up slightly less hung over. There are lots of ways to create time to help out, and you probably won't regret it.

Perceived Lack of Reward- Maybe P*5 points or CnD gift certificates aren't too huge an incentive (though \$5 goes a LONG way at the CnD). However, it boggles my mind that people don't want to spend half an hour course critique stuffing

for a free dinner, or take a couple hours out of their term for a shot at hundreds of dollars from Sanford Fleming Competitions. More importantly, even when there isn't a tangible reward, engineers should be smart enough to figure out the concept of super-rationality.

Super-rationality is, in short, the solution to the Prisoner's Dilemma (Wikipedia it if you don't know). Reciprocal altruism, karma, The Circle of Life, it doesn't really matter what you call it. It's the reason you don't steal even if you can get away with it-if everyone did it, there would be no store to steal from. This is why we need to submit our exams for courses we've already passed, submit WEEF proposals to update the 20-year old equipment for labs we'll never use again and help out those who need it. If others hadn't done it for us, we wouldn't be able to enjoy the benefits.

If there are any other reasons people don't participate and volunteer at Education events, let me know, but hopefully I've resolved the most common concerns engineers have. So get out there, and start not not showing up!

An Explanation of Coop Fee Increases

BLAIR ROGERS
CO-OP REP DIRECTOR

Let me start by introducing myself as the EngSoc Coop Director for the Fall 2009 term. As such, I am supposed to act as liaison between students with issues about the coop program and CECS.

Recently, I had a student ask me about the coop fee increases that we have been seeing over the last several years. Specifically, the student wanted to know where the money goes and why we have been asked to pay more, while seeing fewer decent jobs (and still having to put our resumes into HTML).

So, in early September I contacted a source at CECS and asked about fee breakdown info. Once receiving the data, I did what most engineers would do, and molested it into some fine-looking plots. Figure 1 shows the coop fee increases over the last 6 terms (between 1-A and 4-A). As you can see, the costs have gone up dramatically over 5 years with yearly increases averaging around 6%. A typical student will have given the coop system at Waterloo over \$4000 by the time they graduate. Per term, UW will receive over \$1.76 million dollars (from engineers alone) for the coop program (This is assuming there are approximately 2400 students per term in engineering).

So now that you know how much you are paying the coop program, one may ponder the question - where does it all go? CECS is currently fully student paid and Figure 2 has an answer for exact distribution and was based on the data received from CECS.

Figure 2 shows that over 80% of the coop fee is distributed as Salary and Benefits. The figure also shows that a fraction of 20% goes to increasing the number of available jobs

(termed 'Job Development'), and this amount has to compete with travel, printing, marketing and hardware/software costs; however some job development costs are covered by field coordinator salaries.

In addition to the current cost structure of Figure 2, an outward expansion of Salary and Benefits occurs at a rate of at least 4% per year (which accounts for most of the increases). That is, CECS employees get a raise of over 4% per year.

To give these increases some context trends in pay for the US in 2009 have been given below: [1]

- 1) 13% of Employers will be REDUCING salaries in 2009
- 2) 37% of Employers will be FREEZING salaries in 2009
- 3) On average, Canadian salaries will increase only 1.07%
- 4) CECS pay increases will be approximately 4 times that of a typical worker in Canada

As a final point, I have created a coop fee forecast plot that will allow you to quickly determine how much you will be paying for Coop if you happen to send your kids to UW. Figure 3 below shows the coop fees from 2005-2030. As you can see, by 2015 students will be paying close to \$800 per term (\$6400 total) for a UW coop experience.

So what can you do about this? Come out to discuss at a public forum which will be hosted by EngSoc on November 10, 2009 at 5:30PM in CPH2387.

Sincerely,
Blair Rogers

[1] Culpepper Trends Survey, "Salary Increase Budgets for 2009 and 2010." September 2, 2009. (Accessed 14-Oct-2009). <www.culpepper.com>

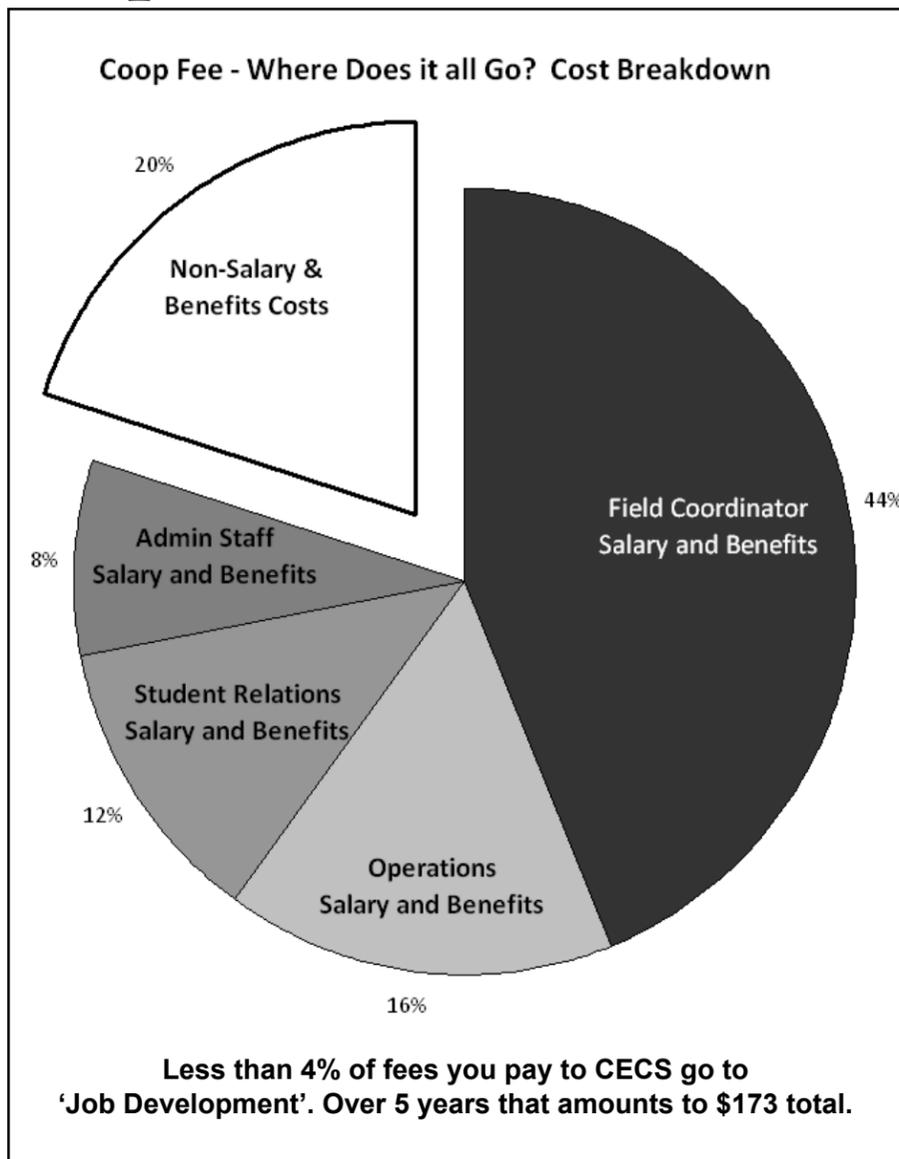


Figure 2: Coop Fee Breakdown.
Note: S&B = Salary and Benefits.

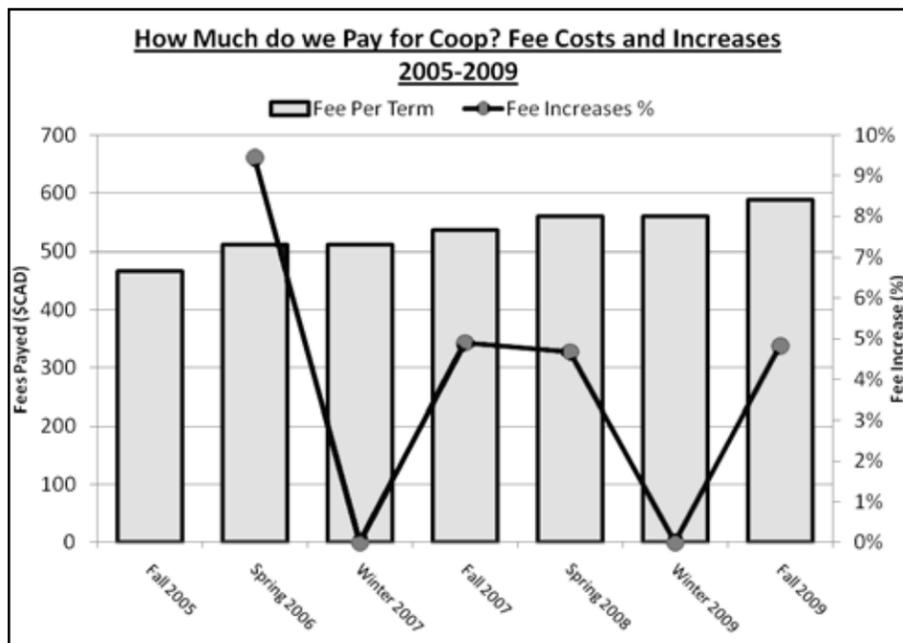


Figure 1: Increase in Coop Fees (2005-2009)

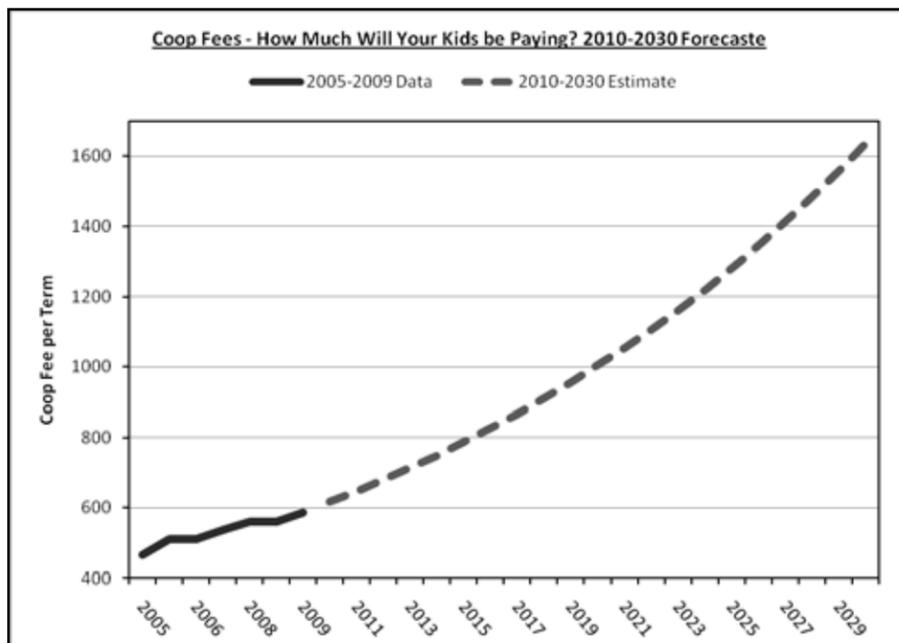


Figure 3: Coop Fee Forecast.

Review Based on the Trailer: The Fantastic Mr. Fox



Fantastic Mr. Fox is a stop-motion animation movie based on the beloved children's book by Roald Dahl of *Charlie and the Chocolate Factory* fame and directed by one of my personal director hard-ons, Wes Anderson of *Life Aquatic* fame. This trailer, and the subsequent movie, is much at a review crossroads for me. I feel that I would really enjoy this movie when I go to see it, but for most of my dear readers, I feel it's a movie that they'd be better off to pass up. However, in traditional *Iron Warrior* fashion, I'm going to leave this sucker up to a point-counterpoint comparison.

Why I like it: I'm a sucker for eve-

rything Wes Anderson; Royal Tennenbaums is one of my favourite movies to this day. The amount of detail and the use of bright colours that is a trademark of Anderson makes all his films a joy to watch and is worth multiple viewings.

Why you won't like it: You've never heard of Wes Anderson. In fact you thought he was the guy that directed 'There Will Be Blood.' You fell asleep during *Life Aquatic*.

Why I like it: I'm a huge fan of kid's movies that don't make the target audience come off as morons. Stylized children's movies are an art form, and are always have a cute, fun message attached to it.

Why you won't like it: You didn't see *Coraline* or *Up* this year because it was 'Kiddy Crap' but then cried manly tears during *Wolverine* because you got to see one of your childhood heroes on-screen.

Why I like it: The stop motion animation, while looking stiff and jerky at times, adds to the quirk and lends the movie a certain style that makes it stand out from any other movie. The characters come alive as a result and feel as vivid as a young imagination.

Why you won't like it: No awesome CG scenes. Specifically, no giant robot car crash gunfights in the ENTIRE MOVIE.

Why I like it: Solid cast lineup. George Clooney, who is in about 50 movies this fall, Meryl Streep, and Willem Dafoe all gave their voices. Not to mention the inclusion of Wes Anderson Staples such as Bill Murray, Jason Schwartzman, and Owen Wilson give the movie top quality voices. They even got a one of the best Simpson Writers on there for no apparent reason!

Why you won't like it: George Clooney slept with your girlfriend,

mother, sister, or Grandmother. In reality, he's probably slept with more than one of those, and approximately 50% of the girls at UW right now.

Why I like it: Cute story, cute farm animals, the prospect of badgers being demolition experts.

Why you won't like it: You seriously undervalue the idea of badgers with explosives.

This movie falls into the same style of movie that *Where the Wild Things Are*, in the sense that is a kid's movie aimed more for the older crowd. This does seem more accessible to bring your illegitimate children to, although I feel they won't like it in the same sense as older people would. The movie comes out on November 13, same day as the apocalypse action movie 2012. If you're one of the people that won't like it, go see that one. We'll compare notes after.

FROM AROUND THE GLOBE

When in Rome...

Third Installment: Lost and Found in the Eternal City



ANDREA MURPHY
4A ARCHITECTURE

Textbooks for architecture courses vary from dense manuals to fictional novels, but none is as rich or as enormous as the city of Rome. Obviously this isn't a text in the sense that we have to read it, but there are definitely chapters that need to be 'read' and understood before you can navigate and appreciate the architecture of the Eternal City. Since it's the season of midterms, and we all could use a cheat sheet or two, I have compiled some Cole's Notes for the figurative textbook of Rome.

Navigation in Rome is practically impossible from the North American mindset of the urban grid, thus knowing some monuments and landmarks prove useful on any adventure into the ancient city. The most important landmark for any architecture student studying in Rome is the Piazza of Santa Maria in Trastevere. Not only is it arguably the most important piazza in the Trastevere district, it is also right next to the Waterloo studio. Finding your way through the winding streets of this old residential area is extremely difficult, and arriving at this piazza can be the breath of fresh air needed to recoup and gain your bearings before trekking off towards the core of Rome.

Heading East across the Tiber River, itself a major landmark, you can find yourself at the Coliseum. An international icon for the ancient world, you can't miss spotting this enormous structure flagging the district of the city which contains the Ancient Forum, the Palatine hill, and other Imperial remains. This monument, like many, is plagued with tourists and thus is not difficult to find- follow the crowds!

Alternately, upon leaving Trastevere, heading North across the Tiber River will get you to a piazza that is sunk into the ground and contains, amongst four ruined temples, a number of stray cats. This is Largo Argentina, primarily consid-

ered an archaeological site, but simultaneously exists as a cat sanctuary where volunteers care for stray cats until they are adopted. Needless to say, these are very privileged cats, since they can roam the ruins freely while the people watch from above, unable to access the ruins. This landmark is excellent for connecting the Campo Marzio, (the ancient training ground of the Roman army and current urban core of the city) with the neighbourhood of Trastevere.

From Largo Argentina, heading North will connect you directly to the Piazza in front of the Pantheon. Like with the Coliseum, simply following the crowds of people will guide you to this monument. Located roughly in the centre of the Campo Marzio, this monument can help even the most lost traveler to find their bearings in the otherwise never-ending maze of narrow streets in this district. The popularity of this site, mixed with its central location has made it a common place for signage to appear, which is really useful when trying to visit all the famous tourist destinations.

Heading East from the Pantheon you arrive at the main boulevard of Rome. Via Corso is the local shopping strip with all the chain stores you would associate with prestigious addresses. It is probably as close as you can get to a North



St. Peter's Basilica and Square have long served as a navigation landmark in Rome. The huge dome can be seen from across most of the city.

Angelo Alaimo

American street, cut directly through the meandering medieval fabric of streets and mid-rise buildings. Wandering up Corso on a Saturday can be a pretty daunting experience, with the local shoppers out and about while the tourists are cutting across traffic to get to the next monument- especially the Column of Augustus and the Trevi Fountain.

Easy to spot from every step of Via Corso is the Vittorio Emanuele monument. A modern intervention in Rome, it's known as 'the wedding cake' and rises high above anything else in the area and sets the southernmost termination point for Via Corso. For navigating Rome, this bright white tall neo-classical building couldn't be a better landmark for finding your

way South.

Finally, if you ever get lost and are hopelessly confused but see a lot of clergy and nuns wandering about, try following them. Odds are that you will be lead to St. Peter's, which is on the West bank of the Tiber River, and easily recognizable by the huge basilica and sweeping exedra which reach out like arms to form an elliptical piazza centered on an obelisk. If you have read or seen *Angels and Demons*, or have ever watched a Papal address, then you will recognize the piazza immediately.

There you have it, a crash course in navigating the city of Rome with only monuments and landmarks to guide you. Alla prossima, Waterloo!

Wild West Adventures



AMANDA LEDUC
2T MANAGEMENT

My Dear Darlings,

It's been three long weeks since I've ranted to you about my adventures out here in the Wild West. I know its hard to go so long wondering what I'm up to, but don't blame me! I didn't decide to take an extra week for this issue due to midterms ... I don't have any! Ok, I'm done being mean now.

Things out here have been going well. I've booked a trip with my cousin Alison to Vancouver for next weekend so I'm totally looking forward to that! I'll share the details in my next article. Currently, we're having a Chinook and the temperature is supposed to increase through the weekend. Should make for a good Halloween!

But the weather out here isn't constant, oh no, that would be too easy. I walked out of the house one day in my regular office heels and straight into 3 inches of snow and ice! I was running late and didn't have time to change to boots, so I slipped and slid and froze my toes all the way to work! The following day, I wore boots and the snow and ice was worse. It was so bad in fact, that I was the first one to make it to the office complex where M3HS is only 1 of 11 tenants. I had a key to the building I'd never used before, so I put it in the door and it opened! Then I walked up

the stairs and heard an odd beeping noise. Crap! The building has a security system that nobody bothered to tell me about. My boss gave me a key, and neglected to give me the code to shut off the security system after using the key. I stared helplessly as the beeping turned into all out sirens in the building. I frantically called Di-Pi who had just arrived in the parking lot below via her BMW driving boyfriend Boo (who was doing donuts). She calmly gave me the code and I successfully disarmed the alarm system without any further catastrophes. To the next coop, remind me to personally give you the code so you can avoid that catastrophe.

On Wednesday October 21, the Dean and a few of his closest friends came to Calgary to visit. They hosted a reception at a super posh venue and had a few speakers about green energy. I had good conversations with the Dean and some of the profs he brought along, so that was nice. Then Babyblue (the president of M3HS) sparked a debate about green energy with the profs ... I thought I was going to get kicked out of UW after that. Fortunately, the Dean seemed to take a liking to Babyblue's ideas and has requested that I report back to him with my opinion after my work term.

Oh yes, the weekends, Thanksgiving weekend in fact. My aunt took off to Banff for the weekend, so I was left the task of cooking Thanksgiving dinner for my two cousins and my Nanny. I thought about doing the traditional turkey, because my

mother would be horrified if a Thanksgiving passed and there was no turkey, but realized I didn't have the time nor the skill to pull that off in a delectable, let alone edible fashion. So my first ever solo cooked Thanksgiving dinner consisted of lasagne, garlic bread, salad, goat cheese and melba toast ... all of which came frozen or in a bag ready to serve. It was delicious and nobody got food poisoning. I deem my first Thanksgiving dinner to be a success.

The following weekend, I attempted to go to a Yoga class on a Saturday afternoon. Google Maps said it would take 13 minutes to drive there, so I left 25 minutes before the class started, and subsequently arrived 10 minutes after the class had begun. If you've ever practiced Yoga, you'll understand how annoying it is when somebody shows up late and the instructor lets them into the class. There is nothing worse than trying to center yourself and quiet your mind with some tardy person fiddling around with their mat and blocks! As a result, I was more disappointed than mad that I couldn't get into the yoga class. Being the optimist that I am, I decided to check out the mall across the street from the yoga studio for a little retail therapy. I met the most beautiful pair of eggplant (you know, the tone of purple that is sooo in style this season) colour stilettos! We hit it off from the moment we met, except when they briefly tried to trip me with their 4" heels. But it's okay, the excessive heel height, although difficult in which to walk, does put me at a daunting 6'-1", and that greatly adds to my

intimidation factor.

Then came the next weekend. Two things happened that weekend; first I went to dinner and the movies with Babyblue, second my family and I moved my Nanny into a senior's home. Babyblue and I went to see "Where the Wild Things Are" and I must say it was a lovely movie, you should see it. Then we went to dinner and discussed business and life and decisions and whatnot. It was definitely a worthwhile and enlightening evening. Sunday was the day we moved the Nanny. It went relatively well. I ran around from 9am - 6pm, moving anything technology related because everybody else was to afraid to touch her computer, let alone disassemble and set it back up again. After weeks of planning, the move is over and the Nanny is settling into her new home.

And then there is the unidentified individual who shall remain nameless. I haven't seen him in weeks, he keeps ditching on the things to which he commits ... like our salsa lessons. Now that he has stopped showing up, the UofC boys have started closing in. One in particular really can't seem to catch the subtle disinterest I continually throw his way. He seems nice enough, but he just doesn't compare to all the wonderful gentlemen back in Waterloo.

Miss you all dearly,
Amanda

Note: Names of co-workers and company have been changed but secretly reflect the true names.

The Brew Man Group: Turning Japanese



DAN ARMSTRONG
3N MECHANICAL
NEIL PARTRIDGE
3N CHEMICAL

It is with deepest regret, that my partner in alcohol and occasional punching bag Dan will not be joining us for this issue. I can only assume he spent this past week, like most other weeks, involved in Sally related activities. Long story short, I get the honour of one whole Brew Man Group issue to myself to talk about Japanese beer. Yippee! Hoorah! Banzai!? Whatever, lets get down to business.

I've been doing my homework in the Far East, sampling everything from local sakes, shochu, and even whiskey. But, we all know where it's at: beer. In Japan, a well timed beer can make friends, turn many business deals, or allow a salary-man to avoid a sticky confrontation back at home. If you're wondering, a late night slosh-fest is conveniently called a "work function" for those of you brave enough to try this back in Canada...

But unfortunately for us beer lovers, Japan's largest brewers practice the nasty habit of brewing watered down, unflavourful beer. The reason for these buzz-kills is not due to the VERY false stereotypes that Japanese have "bad taste in beer" or "low tolerance", but simply a matter of economics. In 1996, the Japanese government introduced a liquor tax act

which placed alcoholic beverages with malt content above 50% in a higher bracket. Consequently large brewers created low malt, Happoshu beers to capitalize on savings, thus translating to low

shelf prices. Hell, I even drank many Suntory "premium malt" beers at Izakaya, all-you-can drink taverns, for this very reason. But don't despair, I will not sink low enough to feature one in this article, and you certainly shouldn't crack open your wallet to buy Sapporo at your local LCBO thinking its the best import from Japan. It's not, and besides, Happoshu beers are not what we're about at Brew Man Group!

Other than the Happoshu giants of Asahi, Kirin, Suntory and Sapporo, there are still smaller brewers that carry on the practice of creating delicious ales. A microbrew I've grown fond of is Yo-ho Brewing Company, based out of the mountainous resort area of Karuizawa (Nagano prefecture). Backed by young brew-master Toshiyuki Ishii, Yo-Ho was founded in 2002 with the objective of bringing new styles of beer to Japan. In fact, Toshiyuki previously studied in the famous Stone Brewing (California) to refine his skills and specialize in American West Coast beer. Since then, he has

expanded his brand through promotion in beer festivals and competitions, both local and international. Despite Yo-Ho Brewing Company being very successful to date, they still maintain an extremely small market share. Therefore, the reason for Yo-Ho's existence at my dingy

grocery store is still unknown to me, but perhaps phenomena like these are better left unaddressed. A further example being how someone (no names said!) can take an hour to meticulously

blow dry his hair, only to coil it into a controlled bed head style. I still might forcefully input Dan's name (oops I said it!) as a candidate at a local sorority. This is beside the point, but nevertheless I am pleased to present three different brews from this brewer. Yo-Ho Brewing Company's Aooni American IPA, Yona Yona Ale, and Tokyo Black Porter each stand out for originality in an otherwise homogeneous land of pseudo-malts.

Aooni American IPA: Aooni directly translates to "Blue Ogre", a creature from Japanese mythology said to be rather demonic in nature. A bold move for a microbrew considering some of the superstitions ingrained in Japanese culture. With such a menacing name, I was expecting a heavy hit in the hop department. My anticipation was met with disappointment. There were hardly any aromas of hops, even when warmed up and swirled vigorously. I could tell already that I wasn't going to find a ditto of Dog Fish Head... Followed up by a quick sip, the hops are somewhat evident and balanced, but not strong enough to carry me through for the rest of the bottle. In terms of an American IPA, this is rather weak and could use some refinement. However, I respect that Yo-Ho is trying to introduce a new style into the market, and therefore perhaps a more reserved palate is the tactical move necessary for acceptance in the Japanese market. [2/5]

Not recommended for consumption, please try: Dogfish Head 60 Minute IPA

Yona Yona Ale: Translating roughly to "every night", I can't help but wonder if I'll be rewarded with a beer worth consuming so copiously, given my last run in with Aooni. A quick look at the can shows promise, a gold winner in it's category from several international brewing industry competitions. Enticing. I quickly cracked the can into a standard pint glass to find out what could be seen.

This brew pours as a surprising, bright peachy-amber colour. Immediately after, a bright white head springs up, and stays for about a whole two minutes. During this time, we can observe nice lacing on the side of the glass. A quick sniff brings to mind a sharp a warm citrus notes, although not overpowering.

St. Ambrose Pale or Apricot comes to mind, two of my favorites from back at home. So far so good. However, my beer bliss slightly was eluded on taste, which was a little disappointing in terms of impact. The citrus was a little too hidden, but in stride with a pale ale style. Therefore, an added benefit is that you might drink several of this beer in one sitting without getting tired of it. Certainly one of the best beers I've tried in Japan to date, and in consequence, I'll see if the budget can cover the nightly quota. [3.5/5]

Recommended for consumption if you enjoy: St. Amboise Pale Ale, notes of citrus

Tokyo Black Porter: On first pour, the Tokyo Black certainly holds up to it's name. The brew is a deep chocolate, darker than most porters I've tried. On top sits a sandy beige head, with hang time rivaling a fight scene in DBZ. When swirled vigorously, I detect strong aromas of espresso, chocolate and alcohol. Wow, aroma! Otherwise unseen in all brews from the giants, I definitely appreciate the change. For those of you who remember, we once rated the extremely prestigious (and now LCBO available!) beer Pêché Mortel. In comparison, Tokyo Black is like a much more subdued version, compromising intensity for drink-ability. Although I'll do pretty much anything for a Pêché Mortel, I can contently subdue my beer-lust with a few Tokyo Black in the meantime. [4/5]

Recommended for consumption if you enjoy: Pêché Mortel, Coffee porters
Props to hops // Neil



The Future of Gaming Stupid Monster :(



JON MARTIN
OBI JON1138

As an Xbox 360 owner and the sibling of a Wii owner, any perceived bias towards or against specific consoles is due to my lack of disposable income. If I could I would also buy a PS3, but as a student, that is not possible. Please forgive any disproportionate coverage; I do my best to cover issues that affect all consoles, without focusing on or neglecting individual systems.

With midterms over for the term – yay – it was time for some gaming, then I got stuck, have you ever gotten to a point in a game where there is absolutely no sign of where to go, no enemies to kill, no plot points to reach? You get to a point in the game where there are just a million of blank hallways leading off in every direction. Sometimes I wonder if the game designers just got lazy and used Cut and Paste to extend the game length.

When it comes to gaming I believe in quality over quantity – a long, horrible game is only going to lead people to thoughts of homicide. Games like Bioshock, which isn't ex-

actly a short game, make the time investment you do make so much more worthwhile.

When you care about the characters, are genuinely tempted to check over your shoulder to guard against enemies, you have found a quality game. Even if the game is short, the replay value is amazing. I played the first Fable three times – once normal, once trying to make all the good choices, and the third going on a murderous rampage and being evil. It's actually not as easy as you might think to be evil in video games; you really have to work at it.

So, back to getting stuck in the game – I reached the boss fight, figured out the pattern required to beat him, then missed the next jump. The game reloads, back at the point before the boss. The next three attempts were wrecked by getting backed into a corner, then beating the monster and missing the jump. I'm taking a break from that game for a while.

On to some system news, mainly for Microsoft and Nintendo – unfortunately some of the biggest news for Sony is posting a loss on their video games division. Microsoft has announced a price cut for the Xbox 360 Elite system (120 GB HDD, HDMI cable, black case) dropping it to \$299, including two bun-

dled games. This finally confirms the abandonment of the Xbox 360 Pro, leaving basic Arcade system at \$199 and the Elite now at \$299. Microsoft is also gearing up for the next system update – due out sometime this month – which will add Facebook, Twitter, Last FM, and Zune Video Marketplace. If you want to try out the updates before they are released, go to connect.microsoft.com and register using your Xbox Live account. I guess they want people in our demographic, because I've got this update and the last one early.

Personally I found the Facebook section (a separate program launched from the Xbox dashboard) to be a little disappointing, as you couldn't actually post on people's walls. Full access to pictures, and friends is great but the Wall is an important part of Facebook, maybe it will become more effective once everyone gets the update. Not having Twitter I can't comment on its functionality – I'm not that interested in constant reminders on everybody's daily activities. Finally, Last FM is not available in any regions besides the US. Over all the update is interesting but not exactly noteworthy or amazing.

On to Nintendo, who is offering some changes to their system line-up. It seems

there will finally be some colour choice when purchasing a Wii – although black and white technically aren't colours. Anyway a new black Wii is going to be released soon, bundled with black controllers, Wii Sports Resort and the Wii Motion Plus attachment. In an interesting reversal of past trends Nintendo will soon be releasing the Nintendo DSi XL. Known as the DSi LL in Japan the new system will be substantially larger than the DSi (released less than a year ago) with larger screens and effective viewing angle. The new version is directed towards groups, so that other people can effectively see what the person is playing. So it is an extra large version of the mini version of the small version of a bulky portable system. If there is logic in that chain of reasoning I haven't found it yet.

That's it for this week, hope everyone's midterms have gone or are going well. To the ones in first year, don't worry about the midterms. Its not the end of the world if you fail the midterm, after all most of the courses have 70% finals – so learn from your mistakes, make the changes you need to make in your schedule/ work ethic/ lack of work ethic, and work hard for the final. Oh, and don't forget, keep on gaming.

An Open Letter to the Class of 2010

The Test of our Generation

MOE ADHAM
4A MECHATRONICS

As I sit writing this article, I hold in my hands a marvel of our generation. A device that allows me to view, with pin-point accuracy, a crystal clear image of where I am currently located, anywhere on planet earth. Ironically, with the

same device I can again, with crystal clarity, see a village in the middle of some poor nation that has no access to electricity. Where children have never seen a toothbrush and where a good portion of them will die due to malnourishment. How convenient.

I'm not about to go on a tirade about how we all need to give up our luxurious lives and

spread the wealth, returning society to peasantry. As a matter of fact, I rarely if ever donate to charities, let alone think about them. As many others have, I have discovered that history will not judge our generation lightly. Unlike the majority of our forefathers, our generation lacks a serious test. We aren't fighting fascism, small-pox, or the Atlantic. We are the best that

our generation has produced; there is clearly nothing we cannot accomplish, with the first paragraph as ample evidence. So before you take a job at that exciting internet company, investment bank, or corporation X, I ask you to remember one thing. We will be remembered for the bridges we have built, and judged for those we neglected to construct.

The Adventures of Dangerman

Reflections on PDEng



Dearest Reader,
To begin with...
*That PDEng, that PDEng,
I still don't like that PDEng
I still don't like it here or there,
I still don't like it anywhere,
I still don't like PD with Eng,
I still don't like it or the message it sends*

The very first article I ever wrote for this magical newspaper was in my 1B term of engineering. It was right after the maiden-voyage of PDEng15, which taught me... stuff? It was a poem based loosely on the Dr. Seuss' "Green Eggs and Ham" and it was remarkably well received, even by

certain PDEng-based faculty members.

PDEng has been on my mind since the recent release of the third-party review, which at first filled me with an excitement that rivaled Christmas-morning. With rapt-attention I scanned the first two or three pages (at least!), desperate for the sock-it-to-'em vindication that was sure to be mine after the Dickensian-travails that PDEng had made of my undergraduate experiences.

My review of the PDEng Third-Party Review: Resubmit!

To be honest when it comes to PDEng, probably nothing will satisfy me short of a French Revolution-style White Terror response. However, I've long since passed PDEng55, the nightmare is over. I should probably learn to let go; move on to other unpleasant things I'm forced to do, like pay taxes, interact with conservatives, or have cavities drilled with insufficient anaesthetic.

I have had positive PDEng experiences. Professor MacGregor and I even sustained a fruitful and admittedly poetic correspondence. I'd like to use the rest of my article this week to feature a poem that Professor McGregor sent me in response to my PDEng55 Sonnet of last winter. Enjoy!

The following is written in the style of William Carlos Williams' "This is Just to Say".

*This is Just to Say ... to PDEng Eric
PDEng has ruined
Your education
Or so
You say.*

*Forgive us
For trying to move
You beyond
CRAP and Drivel.
We will lament
With you
When you*

Are in our place.
-Prof MacGregor

For those of you still taking PDEng, a program I've come to look on as the Kobayashi Maru for Waterloo Engineering, I promise someday you will wear your current struggles as a badge of honour. Every other engineering University in Canada has nothing on you. So for now, steel your perseverance and remember, Dangerman loves you.

Sincerely,
Dangerman

PS:
PDEng Haiku Or "Things I Could Have Done Instead"

Rendered fruitless
So many fruitful hours
Could have watched paint dry

The Estrogen Perspective

The Fine Art of the Dollar Sign



Hey lovely readers,

Firstly, the obligatory congratulations on being done hell week, or almost being done your 3-ish weeks of extreme discomfort, depending on your departmental persuasion.

In the midst of this mentally harassing awesomeness that is exams, I've noticed a few things other than my amount of sleep depleting drastically. No, I'm not talking about my sanity or the amount of coffee in my travel mug, I'm talking of course about my (supposedly) hard-earned money. Don't get me wrong, I'm as strapped for cash as the next person, but the theme of this term seems to be grabbing as much money out of my pocket as humanly possible in one foul swoop.

As is with any return to campus, we're warmly greeted back to school with a firm demand for an absurd amount of tuition fees. Between inflation, added fees, and money-sucking lasers, it's not a matter of if, but a matter of when, the average engineering student will spend \$6000 per term. This is combined with the fact that our co-op fees are projected to continuously increase until the zombie apocalypse finally comes around, and that we are also expected to help fund the school's "nom any green space and parking lots with a very large building" policy. This combined with some of the highest co-op unemployment rates in history, I can safely say I don't feel alone whilst feeling this serious money crunch.

The thing is, now I'm more curious than ever to find out where this money is going. Fabulously free EngSoc events aside, there's just as much, if not more fundraising going on right now than there ever has. Student groups, clubs and varsity teams

are looking to their fellow students and the general public to help fund their respective causes. Wait, shouldn't most of these groups be at least partially funded by the same people who just took my money? What's going on here? Is this an inside deal between all these groups to see how far they can push us before we actually run out of money and give up? Or are all of these extra funds going towards a secret laser-firing zombie robot that they're hiding in E5 right now that will be dispatched upon the student population? It would explain a lot.

In the mean time, while our extra monies are being tugged away from us whilst kicking and screaming, there are a few things you can do to help yourself out, and I'm

talking about some things that are a little more practical than asking banks to install breathalyzers on ATMs (although this would help a lot of us out). My top suggestion is combining your causes. Need to buy something to eat but also want to help support a cause? A lot of student groups, not just GradComm and the concrete toboggan team, sell more practical things, like food, as fundraisers. Hit some of these groups up and you'll help them out and also cure your hunger pains in one fowl swoop. Keep an eye out for student-oriented events that are run by people who know what they are doing. By this I mean that they are aware of the three golden factors that will bring people out to an event: free money, free food

and free t-shirts. Whether it's an EngSoc meeting for the free dinner, or a 10-minute survey for the 10 bucks it promises, there are a ton of hidden perks you can sniff out if you're really in a pinch. And of course, as always, this is one of those situations where personal creativity is strongly encouraged.

Needless to say, the image of the typical broke student is getting a serious overhaul right now thanks to a wonderfully timed cluster bomb of events. But don't fret; we're supposed to be the rich ones in the long run, right?

Stay fabulous,
Lo Bosworth
ohheytherelo@gmail.com

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ARTSINEERING

Got Your Arts On?

MICHEAL SELISKE AND MEGAN POLLOCK
ARTS DIRECTORS

Hello Artsineers! The past few weeks have been jam packed with arts news and that will not change in the upcoming weeks. As a recap, 5 photography contest prizes have been awarded so far with the winners shown below. We ran a very exciting colouring contest which had great participation and highlighted the artsineers ability to colour between the lines. Check out the arts board in between POETS and the orifice to view all of the submissions. Congratulations to Sara Greenberg for winning that contest and Caroline Pawlowski for coming runner up. The arts directors also ran a "decorate your own milk glass" day where artsineers were encouraged to be creative and decorate a glass that they can use in POETS on Thursdays and Fridays for their BEvERages (or take them home). Our apologies for not getting the sealer right away, but glasses should be sealed by the time you read this article. We also ran a DDR Dance party for those of you who wanted to show your artistic side through dance. This event was a great time and we were surprised at the skillz shown by fellow artsineers.

We will be running a POETS Poetry Slam on Thursday November 5th so break out your poetry skills and show the world how artistic (or not) you are with your words. We have the tickets for Avenue Q and will be providing information regarding pickup and payment within the next few days. The next big contest of the term is a Photoshop contest where we provide a picture and you change it into whatever you want. The most imaginative entry will win the prize. Check your inboxes for a copy of the photo. This contest has started and will continue until November 17th. Also, as always, check the arts board weekly for the new photography contest theme which starts every Monday and continues until the following Saturday.

We will be reminding you about the upcoming events over the mailing list and through poster ads so stay tuned. And always stay artsy!



Contest Two (Above)
Theme: Green

Winner:Rebecca Marshall 1A Civil

Contest Three (Below Left)
Theme: Old

Winner:Spencer McEwan 3B Electrical



Contest Five (Above)
Theme:Halloween

Winner: Myles Tan 1A Systems.

Contest One (Above Left)
Theme: Engineering Winter
Winner: Calvin Yan 3B Civil

Congratulations to all photography winners!

Contest Four (Below Right)
Theme: Opposites
Winner:Myles Tan 1A Systems



SuChemDu Round Three

The Lanthanides

ALISON LEE
1A NANOTECHNOLOGY

| | | | | | | | | |
|----|----|----|----|----|----|----|----|----|
| | Nd | Ce | | | | Sm | | Pr |
| | | | | | Eu | Tb | Nd | |
| Sm | | Ho | | | | | | |
| Ho | | | Sm | | Gd | | | |
| | Gd | | | Dy | | | Ce | |
| | | | Ho | | Pr | | | Nd |
| | | | | | | | | Gd |
| | Ce | Tb | Gd | | | | | |
| Eu | | Gd | | | | Pr | Tb | |

| | | | | | | | | |
|----|----|----|----|----|----|----|----|----|
| Cr | Cd | Cl | Ca | Cm | Co | Ce | Cs | Cu |
| Co | Cm | Cs | Cd | Ce | Cu | Ca | Cl | Cr |
| Cu | Ca | Ce | Cr | Cs | Cl | Co | Cd | Cm |
| Cd | Cs | Cm | Cl | Co | Ce | Cu | Cr | Ca |
| Ca | Ce | Cu | Cm | Cr | Cs | Cd | Co | Cl |
| Cl | Co | Cr | Cu | Cd | Ca | Cm | Ce | Cs |
| Cm | Cl | Cd | Co | Cu | Cr | Cs | Ca | Ce |
| Ce | Cr | Co | Cs | Ca | Cm | Cl | Cu | Cd |
| Cs | Cu | Ca | Ce | Cl | Cd | Cr | Cm | Co |

Use the elements Ce, Dy, Gd, Ho, Hy, Nd, Pr, Sm and Tb to complete the above puzzle. Each element should appear only once in each column, row, and smaller box.

Look for this week's solution in the next Iron Warrior coming out on November 18th, or on our website at iwarrior.uwaterloo.ca.

Last Issue's Solution.
How did you do?

Thumbs Up/Thumbs Down



Thumbs up to the UW Boys Hockey team for going to my yoga class...topless



Thumbs down to the network for blocking Visual Studio's online help function. I'm dumb and I NEED it.



Thumbs up to GRT for having 15 minute headways for the iXpress on Saturdays. I can finally go places.



Thumbs up to the Nano motion finally passing on EngSoc. The yearlong hell-fest is finally over!



Thumbs down to Jobmine for begin so friggin' slow. Joberloo better not be the same.



Thumbs down to the absence of thumbs up/thumbs down in the last issue of *The Iron Warrior* - be sure to send yours in people!



Thumbs down to influenza season starting now. Everyone around me is infectious!



Thumbs down to Acanac for billing me almost a month ago and still not providing me with any internet service yet.



Thumbs up to democracy. Be sure to vote in the upcoming referendums from 4pm on Monday, November 9th to 4pm on Wednesday, November 11th.



Thumbs up to the extra hour this past weekend.



Thumbs down to labs that aren't relevant to the actual lab questions. WHY MUST YOU MAKE US SUFFER?!?!?!?

Come out to an *Iron Warrior* meeting.
Every Monday at 5:30pm
in *The Iron Warrior* Office (E2-2349A).
No Experience Required!
Everyone is welcome!

Send Your
Thumbs Up and Thumbs Down
to theirironwarrior@gmail.com

THE IRON INQUISITION

Angelo Alaimo, 2B Electrical

“As suggested in the review, how should PDEng mend relationships with students?”



Karthik Ganesan
3N Computer
“Weekly Motivational Speeches”



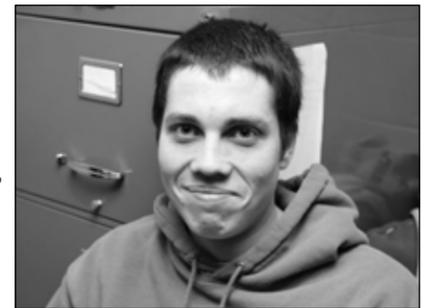
Marc Tan
2T Civil
“Admit someone effed up!”



Michael Hughes & Ester Bogod
2B Computer
“Dinner and a Movie.”



James Thomson
2B Computer
“What's PDEng?”



Adam Klett
2N Mechanical
“Charity Kegger.”