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Check us out @ <http://iwarrior.uwaterloo.ca/>

Welcome to University of Waterloo Engineering

Welcome to Orientation Week 2003!

You've made it through a stressful year of your parents worrying about the double cohort, you worrying about the double cohort, a bunch of exams in some not too easy courses and maybe a summer spent working to pay for that first term of tuition. The \$4243.99 is a tough pill to swallow, even after six work terms!

But here you are, at the University of Waterloo having been accepted into what is widely known as best engineering school in Canada - and we're all too happy to confirm that for you over and over again :)

So you've either just cracked this open after having received your frosh kits, or you may have waited until after the full first day of activities to spend a little quiet time taking everything in. Either way, rest assured that you are now a passenger on a very wild and wonderful ride - one that you have ultimate control over. Over the next few days, and indeed years, you will meet and associate with some of the smartest minds in Canada (other than your own of course) in the way of classmates, professors and industry professionals. You will have the opportunity to represent your class, faculty and university at regional, provincial and national competitions, on teams and advisory committees.

The Faculty is fortunate to have sufficient smart minds with similar interests that it has been able to build and sustain

award winning sports teams such as the Alternative Fuels Team, Mini Baja, Formula SAE, Clean Snowmobile, Waterloo Aerial Robotics Group and Midnight Sun Solar Race Car. Quite apart from the vehicle teams, we also have branches of Engineers Without Borders and the Institute for Electronics and Electrical Engineers (IEEE). Watch out for recruitment posters during the first weeks of class and take note of the time and place if any of these teams interest you.

The Engineering Society, whose logo forms a large portion of the back of your leaders' shirts, consists of a number of executive and director positions filled by dedicated students that help to continue to provide invaluable services to you. These services include the online examination bank, which allows you to view and download old midterms and finals; the coffee shop, offering a full range of food and beverages to get you through the long grueling days of first year; POETS, the Faculty lounge and bar, complete with state of the art sound, full entertainment systems, and foosball; and the Engineering Society Office, providing low priced photocopying and novelties.

To help with some of those tuition and living expenses, there are many scholarships and bursaries for which any student can apply. In addition to this, many faculties (including this one) as well as the Federation of Students (FEDS) offer many on-campus jobs. For those of you who

might want to diversify your involvement across the University the FEDS offer job opportunities including working at Federation Hall or the Bombshelter, the Turnkey Desk or Walksafe. The housing offices of your residences may have job openings at their front desks or you may want to follow in the footsteps of your Don and put in an application. For those of you who are more politically boisterous, there are representative positions on the FEDS Council and in its executive. You will be thrust into ongoing tense and not-so-tense relations with the University and the City because after all, some people are always up for a good argument.

Snippets of all of these facets of University life at Waterloo will be presented to you during Orientation Week and

afterwards, with many opportunities to explore the ones of interest to you in more detail. All that is required of you is the desire to make the most of what will easily be one of the most rewarding periods of your life.

Having said all of that, and you will hear this over and over for the next few weeks, but welcome to Waterloo, the University of Waterloo and to the Faculty of Engineering and we hope you enjoy your trip!

Sincerely,

James Kunz and Justin Bishop



University Eating: Surviving Residence - Frosh Edition

Ryan Consell
3A Mechanical

Welcome to the V1 cafeteria. On today's menu we have a choice between brown cardboard smothered in a pasty gray sauce and gray cardboard smothered in a pasty brown sauce.

Okay, so the caf isn't as bad as all that, but the repetition can get a bit tiresome. The following are some useful strategies for surviving the residence food.

1: Know your options

Assuming that you're on the standard meal plan (and not some wacky St. Jerome's thing) you have full access to 5 cafeterias. Each of these has its own flavor and choices. Important to note are Brubakers in the SLC, which can provide you with your (somewhat overpriced) pizza quotient as well as the occasional Belgian waffle (mmm so good). Also, the DC caf has a Tim Horton's, a Mr. Sub and a source of Chinese food.

Next, check the calendar. There's one or two posted at every caf stating who's serving what and when. Sometimes there's something good being served at another caf. Usually not, but you'd feel dumb missing steak night for steamed beans and goo.

Finally, experiment with the grills and sub places. A Philly cheese steak or grilled cheese can often be a fine substitute for the glop served at the main counter.

2: Spices

Cafeteria food is made to be edible for the largest portion of the population as cheaply as possible. The emphasis here is on edible, not enjoyable. That basically means bland. The more flavorless the food, the fewer people there are that can't eat it.

So what can you do about bland food? Bring your own flavor. You'd be amazed at what some decent pepper and a bit of bar-

beque sauce can do. Plus having your favorite brand names from home makes the transition a lot easier. I suggest having the following with you at all times in the cafeteria: salt, pepper, BBQ sauce, soy sauce, oregano, Tabasco, garlic powder, your favorite salad dressing. Anything else that you're used to having access to at home is also highly recommended.

You'll also probably find that having the right kind of sauce is a great way to meet people. Nobody else likes the food either.

3: Snacks

Golden rule of snacking: don't buy them at the cafeteria. Your meager meal plan does not allow you to frequently buy any of the tasty goodies available to you in the cafeteria. Satisfying your munchies with cafeteria food will have you completely out of meal plan by mid October.

Instead, buy your snacks in a normal

supermarket, or even better, get your parents to buy them. (By the way, the closest supermarket to residence is just west of the university on Columbia Ave.) Granola bars, yogurt, fruit cups, potato chips, crackers, popcorn, it doesn't matter - they're all much cheaper to buy off campus. Don't be fooled by the "half price" at the caf. They're half price because you already paid the other half. Double the price, then see if the Ben and Jerry's is worth it.

4: Dietary restrictions

So you have a complex set of dietary restrictions. You're a lactose intolerant, celiac, vegetarian, diabetic who's deathly allergic to nuts. All I can say to you is good luck. The university is always ready to accommodate the special needs of their students. So make sure your needs are well known.

A final word of advice: if the food ever tastes really good, and seems very heavily seasoned, assume it's that way to cover the flavor of rotting meat.

"you'd feel dumb missing steak night for steamed beans and goo."

Letter From the Editor

Getting Involved ... At a Medium Pace

Joseph Fung

3N Computer

Editor-in-Chief



For some of us, this is just another term in the seemingly endless parade of profs who feel it necessary to inundate us with not quite completely incomprehensible oratory that on occasion has some small pertinence to the assignments and exams. And for others, those of you receiving this special Frosh issue for example, this is the start of something completely new. I'm sure I'm not the first (and hopefully I'm not the last) to welcome you to the University of Waterloo.

What you're now reading is a special Frosh issue of the Iron Warrior. Over the course of a typical term, the Iron Warrior publishes five issues - one every other week, with a week-long break over midterms. In fall terms, however, we also put out an extra Orientation week supplement geared towards introducing first-year students to the university and to Engineering life. This is said issue. Thank you for reading it.

What I'm going to address in this, my first editorial, is the idea of becoming involved at the university. You are most likely going to be overwhelmed with the large number of groups, teams, clubs, organizations and societies that are seeking your involvement - remember, you don't need to choose immediately. Feel free to take a term to grow accustomed to what each club has to offer; by doing so you can ensure you don't overload your schedule or become involved in something you won't enjoy.

Although I'm advocating taking your time, I'd also like to emphasize how important it is to become involved. Being an all-round student is crucial to enjoying your university career. To be honest, the program you're about to enter is not going to be easy. It's going to be stressful and it's going to force you to stay up very, very late, very, very often. Being involved in extra curricular activities is a great way to break up the monotony of that work.

Essentially, what I'm advocating is to be involved, but to do so intelligently. Don't rush to join every club you see as you'll only burn yourself out. Take your time and be choosy.

There are a number of ways to become involved and I'd like to introduce you to a number for which I am particularly fond. Yes, this is blatantly pushing my particular choices in hopes of convincing some of you to join up. No, I won't do this every issue. This one's special.

The first is the Engineering C&D (Coffee & Donut shop). Everyone is free to shop in the coffee and donut shop, but what few people know is that it's possible to earn P**5 points for volunteering your time as staff there (for those of you who don't know - P**5 are spirit point classes compete for - the three winning classes each term earn cash prizes). I myself first started volunteering at the C&D in the summer of 2002. For nine hours each week I'd be able to relax in an environment where I could pick my own music, chill with the other staff and meet a lot of new people. It was a blast and I highly recommend it. If volunteering at the C&D sounds like something that would interest you, drop by and ask for Mary - she can hook you up.

The second item I wanted to mention was the entire series of Campus Rec teams and athletics programs offered at the PAC (Physical Activities Complex). If there's a sport you enjoy, chances are there's already a team or club you can join. If not, they're always open to starting new clubs. I first joined a club in my 1B term - the Juggling club. Most recently however I've taken advantage of the \$40/term martial arts club and the free squash courts. Physical exercise at the fraction of the price of a gym's membership. Chiseled abs and Adonis-like physique here I come. In all honesty though, it's a cost effective alternative and there is a ridiculous number of options.

The final item I wanted to highlight was the Iron Warrior. The Iron Warrior is the University of Waterloo engineering newspaper and gives all engineering students the opportunity to improve their written communication skills. It's not required that you have any previous news-

paper-related experience, only that you have a desire to participate. Every term, this term included, there are openings for writers, photographers and editing staff.

I first became interested in the Iron Warrior in my 2A term - when I passed by a staff meeting and noticed they had donuts (yes, there are free drinks and snacks at the meetings). I was lured in by the tempting pastries and haven't left the office since. If you're at all interested in participating in any of the above capacities, or if you simply want a donut, feel free to come out to our weekly meetings to see how things are run.

The final point that bears mentioning is the way the Iron Warrior works across terms. Although in the past, the ASoc and BSoc Iron Warriors were run independently, over the last couple years we've gone through a lot of changes - changes which have resulted in a paper that's almost completely uniform across the two societies. This means that if you join the paper on one stream, you're more than welcome to continue on into the other society.

So in closing I'd like to leave you with two examples, each indicating an extreme of involvement. I have a friend who approached me this term with a long diatribe about not know UW had a juggling club and that now he's graduating and can't find the time to join. Don't let this be you. It sucks. On the other hand, during my last term in school I was so involved that when I calculated how much time I'd spent in class, the sum total was depressingly far below the 50 hour mark. For the entire term. Don't let this be you. It sucks.

If you have any questions whatsoever about the newspaper, volunteering or anything else about getting involved here at UW, feel free to drop me a line at iwarrior@engmail.uwaterloo.ca

Questions? Comments?
We welcome letters and feedback from all our readers. Please email us at:
iwarrior@engmail.uwaterloo.ca

the IRON WARRIOR

The Newspaper of the University of Waterloo Engineering Society

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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.

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UW Students Volunteer in Costa Rica

Jeff DeLoyde

A group of 10 University of Waterloo engineering students are departing for Costa Rica on Monday, August 25 as part of an environmental volunteer work expedition.

This group of 4th year environmental engineering students will dedicate 7 days out of their 12-day non-credit fieldtrip to working with locals in a remote community. Located at an altitude of 6000 feet in the mountainous Durika Biological Reserve, the community boasts an exhilarating diversity of lush rain and cloud forests, monkeys, toucans, and jaguars.

"We will be working on a micro hydro-electric project, planting trees in deforested areas, and bringing used clothing to a nearby indigenous village," said Kelly Bush, a UW environmental engineering student.

The students will also be helping the community with daily tasks such as gar-

dening, repairs, and the always favourite herding, milking, and feeding of the goats. The goal is for the students to integrate themselves into the daily lives of the people they will be staying with.

Each morning the students will work in the community, then trek in the afternoons on rainforest trails to waterfalls, an indigenous village, and, for two days and one night at an elevation of 10,000 feet, backpack to the continental divide from where both the Atlantic and Pacific oceans can be seen.

The 10 UW students will be traveling as part of a group of 15 university students from across Ontario. This cultural/environmental experience is led by John McKillop from Journey

South, a Toronto-based teacher turned eco-adventure travel operator. This will be his 9th student fieldtrip this year.

"John was a high school teacher of mine who led a school group that I was part of to Costa Rica in 1998," said Jeff DeLoyde, a 4th year environmental engineering student at UW.

"John was so enchanted by the beauty and spice of the place that he retired early

from teaching and now leads university and high school groups to Costa Rica," said DeLoyde.

The Durika community was founded 15 years ago and includes about 30 residents who left their city lives for a simpler lifestyle. The community is entirely sustainable in that they produce all the food and materials they need on-site.

They use the money raised through eco-tourism to buy tracts of rainforest with the aim of creating a protected wildlife

corridor between Durika and La Amistad National Park. To date they have secured 18,000 acres of rainforest. This conservation effort is critical since La Amistad is the largest park in Central America and is a UNESCO

designated World Biosphere Reserve and World Heritage Site.

"University students often use these fieldtrips as a springboard for independent travel around Costa Rica and Central and South America," says McKillop.

Costa Rica is a paradise for naturalists, with countless species of wildlife, plants, and ancient virgin rainforest.

"This is truly a once in a lifetime

opportunity," says Bush.

For more information contact Jeff DeLoyde at (519) 883-7839 or by e-mail at jdeloyde@uwaterloo.ca or John McKillop of Journey South at (416) 306-0760 or by e-mail at info@journeysouth.com. Alternatively visit the Journey South web site at www.JourneySouth.com or the Durika Biological Reserve web site at www.durkia.org



Scenic Costa Rica

"This group of 4th year environmental engineering students will (work) with locals in a remote community."

"The 10 UW students will be traveling as part of a group of 15 university students from across Ontario."

Time to Get on Our Feet

Afsheen Khan
1B Chemical

Year 2003 Black out that hit over 50 million, spreading from New York state to all the way up to parts of Ottawa, was one of the more serious events that occurred in the past 26 years in North America. It was a great mishap, the cause of which is still unknown. The black out targeted residents when temperatures rose up to 32 degree celsius during daytime and nights were too warm with hardly any wind or cool breeze blowing across (of course what else would you expect in mid of august).

The people of Ontario greatly suffered as ATM machines were not working and many people did not have cash on them to buy food or beverages. On the other hand, many people had large feasts with their neighborhood as all the stored meat and dairy products were going bad in the refrigerator. People stuck in Go-trains, subways and elevators were delayed to get back home on time. There were no floodlights so the baseball and football games were postponed. The Ministry of Health hooked up generators to power the hospitals. All the domestic and US trans-border flights were postponed and 70,000 passengers were affected. As darkness fell on the city, the residential area was patrolled by the dedicated and tired police force. People tackled the situation patiently and cooperated with each other. There were hardly any casualties.

The Mayor of Toronto in said: "Well, we do everything we possibly can ...I know it is scarce but please be calm. We

are going to make sure every one is evacuated from subways. I know it is scary to get stuck in an elevator I want to ask people to conserve water, not wash your car for a couple of days won't hurt it. Please turn off your air conditioners before the hydro comes on I don't have a direct time but I know they are working hard on it. I am proud of this city and its emergencies..."

Ontario has been in a vulnerable situation for the last year and a half due to our power grid's dependency on its U.S. counterpart. It was believed that the lightning at the Niagara power station might have been the cause of the blackout. It is useless to play blame games when the damage has already been done, so we now have to discover how to avoid such an incident from happening again. We need to foresee and rectify the problems in our power grid before they strike us and our economy again. The consequences of such a power outage are severe and it's time for us to realise that we need to expand our sources of power and become independent by generating a surplus of our own. People should not take Ontario Hydro for granted. Electricity generation is not magical; it has been developed with great effort and hard work.

Now as engineers here at Waterloo it is our responsibility to help save our province and nation from such a disaster in the near future by both conservation and expansion. I am sure we can do it! We have the means and the brains to go about it. It the time when we have to learn to stand on our two feet set up our own grid to meet our needs and not to depend on others for power. The future is in the hands of the engineers of tomorrow and we can make it or break it.



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Advice

Advice from a Well-Travelled Man

John Olaveson

1B Civil



Welcome all Frosh! But this article isn't really about Frosh. So that's all you'll see on that (I'm sure you'll all agree) over-discussed subject from me for now...

But then, what do I talk about? In previous issues, I've discussed rampant killer squirrels, slime-volleyball, the Ontario Society of Professional Engineers, and whatever other assignments have been issued me by my learned editors. But this time, there was a general call for articles. What you read is my response.

We all know, or will soon know, about co-op jobs. Some are good, some are bad, some don't even get one. First year its really random. In upper years too, although the higher you go the better the average job.

We all know what we think of classes. Some of us hate them, I don't mind them as a way to get me out from behind a Playstation II controller. That's right, I don't live only for video games. There's also beverages, parties, and girls. Classes are a way to keep informed about upcoming events. So is residence. There are some good party houses that you'll end up at one day or another.

I'm going to talk about the importance of moderation. No one can spend all their time partying or schooling or lounging and maintain a healthy body and mind. No human is designed for that. So do a bit of it all. Sure, you've likely heard this before. In fact, I may have done an article like this before. I forget now. But moderation is the key.

Go rollerblading or biking or hiking, or check out that big gym on campus, to get away from stuff. Not only do those things keep your body healthy but exercise lets

the mind work out issues that you might not even know you have. Two for one.

Cook for yourself. Cook something more than just hot dogs and Kraft Dinner. Don't think I'm saying to stay away from those excellent food sources. But do something fun with them, if you don't go all-out and make a stir-fry or stew or pasta. Add some flavour, some spices, some veggies. Vegetables keep the body running smoothly and feeling fine. All meats, grains, and beverages (that's code, by the way) will go a long way to shortening a lifespan. Yeah, eating well may feel like a lot of work, but make it fun! In fact, make all of life fun! Just don't throw spit-balls at me. Or you'll be the subject of my next undercover story. And then we'll all see what kind of creep you really are.

Read a book (not a textbook, most of those are too dry to be any fun). Reading can take your mind off school. I know. I spent hours reading way too late into the night during my first term. But a good book is a cure for over-schooling. Writing, too. One needs not be good at writing to gain its benefits. Just take a pen or pencil and use up some of that paper that's sitting in your notebook. Throw it away when you're done if you want. Writing can help to dislodge the junk that clogs the mind.

Sleep! I can't stress that one enough. After a long and tiring day, a bed feels so good. Some people like to bathe before bed. Do what feels best. But get sleep. One or two late nights won't hurt. But moderation, people! Sleep enough that you can enjoy those parties without passing out all the time. You can definitely hold your beverages better when you're well-rested.

That does it for my words of advice for now. But I'll be back, with undercover exclusives and high-risk investigations. What really happened when the roof of the SLC collapsed? Who is that mysterious person who came into my dorm room once a week last semester? Soon all will be revealed.

Free Money! Here's how!

Emma Bardon

Vice President, Education



Did you know that the University has millions of dollars that they need to give away to students in financial need? Did you know that it's really easy to get it?

Step 1: Apply for OSAP. It doesn't matter if you don't think you'll get anything, it doesn't matter if they say you won't get anything. You just have to apply to be eligible for free money (that you NEVER have to repay) from the school. Go to <http://osap.gov.on.ca> and fill out an application.

Note: if you are not from Ontario, apply to the student loans program of your home province.

Step 2: Apply for a Bursary. Go to <http://www.adm.uwaterloo.ca/infoawards/interface/main/current/2583-1-Bursary->

“For a full, searchable list of scholarships, bursaries, and student aid available to you, sign up for an account at www.studentawards.ca

App-July-03.pdf to get a printable form, or drop by the registrar's office (in Needles hall, 2nd floor) to pick one up. Fill it out, write any letters they ask for, and drop it off again before the deadline. Before the end of the term, they'll let you know how much they're giving you.

What's the difference between a scholarship and a bursary, you ask? A scholarship generally depends on your marks. If you're not right up near the top of your class, you probably won't get one.

Bursaries are based on financial need. All they really ask marks-wise is that you're passing.

For a full, searchable list of scholarships, bursaries, and student aid available to you, sign up for an account at www.studentawards.ca - they have a full list of scholarships and bursaries available to you

both through the school and externally, based on the criteria you give them.

If you have any specific questions on scholarships and bursaries, the student awards office can be reached at studentawards@uwaterloo.ca.

First Year Advice

David Yip
1B Mechanical

Hi there, welcome to UW engineering! If you're like me, by the third day of frosh week you'll hate the word "frosh" as you'll hate the food at V1. Hopefully the lot of you have weathered the dehydrating death march known as "frosh week", met some people, enjoyed Single & Sexy, among other things. Throughout this issue of IW I'm sure there will be articles of general tips, things to do, checklists, etc.

Quickly I'll fire these off.

- * Eat
- * Sleep
- * Exercise
- * Play
- * Study
- * Get help if needed

This heavy stuff - study, exercise, etc - these things you'll already know if you're smart, or will learn the hard way if you're a bit slower. I'm in group B; I didn't follow any of those points during 1A, and I'm probably a lot worse for it. In fact my 1A experience is probably exactly what you shouldn't do, but I digress.

Apart from those aforementioned general lessons that you will hear a lot, there are a few fine details that have stuck out in my head from my first year experience. These are easy to do, don't require nearly as much effort as studying or exercising.

* Eat at South Campus Hall Festival Room for lunch. It's DAMN good. Plus it's a short walk from RCH. The first week or two no-one knows about it, but once the word is out, you'll be leaving class EARLY to get ahead in the custom pasta line. My friends and I did.

* If you're used to surfing the net a lot, remember to check your daily usage. There's a bandwidth cap - last time I checked if you download more than 500 MB a week you get booted into a SUPER SLOW connection. It's really embarrassing confronting the "What were you downloading?" questions when you have to borrow your roommate's computer to get an assignment. The cap is probably lower now because of more students. Even better, just cut down on your surf time, and get out and talk to people, or study, or something else.

* Buy a mini stapler and carry it with you at all times. Essential for stapling assignments prior to hand-in, organizing study notes, etc.

* Don't buy all your textbooks before classes start. It's tempting to do the "fresh start fully prepared" buying spree, but there are some books you just won't need, even though it's on that sheet of textbooks they give you. In addition to saving some hefty coin you'll save yourself a morning of waiting in line.

* Don't worry too much about the ELPE, but worry a little. It's not a big deal, but you, like some of my friends, will be annoyed if you fail it and have to take an English credit. It probably wouldn't be a

bad idea to spend five minutes to remind yourself how essays are written.

* Don't worry about that Math thing; the worst thing that can happen is that you get assigned to a problems lab where you get extra TA help, which is in fact a good thing.

* If you have a nice bike, don't leave it outside. It seems kind of obvious, but I left my bike locked outside during 1A and it was fine. Someone cut my lock one week into 1B.

* There is a new city out there (unless you're from the area of course). Check it out, but not without a map, or a local student. Standard navigational logic does not apply in KW. I quote last year's IW Frosh Issue: "You may know that roads in England are based on old sheep paths. You probably don't know that the same is true of KW, except the sheep were drunk at the time. For example, King and Weber intersect three times."

* Also keep in mind that on campus and off campus are like two different countries, where demographics, language, customs, cuisine, currency, and culture differ.

* Try to read things: a friend of mine whose boyfriend is in my class complained that he couldn't read her a story anymore. Plus if it's the news you read, you'll save on some minor embarrassment when you leave the university bubble. "What? A war? A new Prime Minister?" Try CNN, BBC, CBC, the UW Bulletin, Imprint (student paper) and uwstudent.org.

You'll note this article is basically in point form - perhaps a testament to diminishing writing skills as well.

* Do NOT eat Mr. Noodles. Mr. Noodles is the lowest common denominator of instant food. Some of your classmates can probably suggest more palatable instant alternatives.

* Finally, get to know people. Be open and friendly! Help move in, or set up a computer, or just chat. In high school people with technical inclination may have fitted a rather narrow profile, but in my mechanical class of 2007 I have guitar players, a DJ, freestyle rappers, downhillers, artists, and a jazz singer, to name a few.

As a closing note, you will undoubtedly hear reams of advice from professors, your Bigs, your Huges, and administration. Still, the best way to learn is to just get out there and try new things, meet new people, and just take advantage of your new environment and lifestyle! You'll only get out as much as you put in.

"I have learned throughout my life as a composer chiefly through my mistakes and pursuits of false assumptions, not by my exposure to fountains of wisdom and knowledge."

- Igor Stravinsky

Completely unprofessional personal-interest plug:

Check out the UW bloggers web-ring for some insight into what your later year life might be like. <http://p.webring.com/hub?ring=uwebbloggers>



A Typical Day in Rez

Here's how You're Getting Ferschnickered!

Liam McHugh-Russell
FEDS VP Education

Some of you may not pay your own tuition, but I bet that a lot of you do. You're in a magical place called Engineering at UW, which according to some university administrators means you get an unending supply of scholarships, and since you have a job, apparently you have no financial need. Certain unnamed higher-ups have made these views known, although not publicly.

Well, I know a lot of engineers that see the situation a little differently. For one, a whole lot of engineers, especially ones in lower years, can't find co-op jobs. That means none of the financial benefit of those swanky high paying jobs at the button factory. Not to mention a large portion of those who do find jobs do so in the mid-

dle of term, meaning that, while their weekly pay might be significant, it doesn't add up to enough to pay one term's tuition for a whole bunch of people.

Maybe you missed it, but there was also a tech bust, and engineering is - surprise - a technical field. Many employers can't pay to fly you to California, can't pay to find you a cheap apartment, and certainly can't pay the sizable salaries that they used to. Which contributes just a little more to the growing attack on the invincible financial situation of our beloved engineers.

It sure doesn't help that your tuition (including the coop fee) is just \$400 short of being twice as much as for regular arts students. Your tuition has gone up by just under 40% since I started in the fall of '99, and over 100% since '95 - less than ten years ago. You're now paying as much per term as some of your older siblings or

cousins would have paid for engineering in a whole year.

As you probably know, many of you don't qualify for OSAP. This is probably in part because the OSAP calculations have changed over the years, which has led to the removal of almost 140 000 students per year from received support. So if you don't get OSAP, consider yourself part of two special groups - those who will one day wear the Iron Ring, and one of the 140 000 that should get financial aid, but don't.

Keep in mind that this ever-harder to pay for education isn't ever-better. Most departments on campus have had to cut spending over the past few years, and engineering has just been able to find the money to break even instead - thanks to some generous donors. That means the quality of your education is about what it would have been five years ago, if long waits because of the double cohort don't

effect the quality of your education.

There are small things you can do to fix the problem. There's a whole pile of bursaries that you might qualify for that you can pick up applications for at the Student Awards Office. There are people who are trying to get this problem addressed - your EngSoc reps are one, and the FEDS (despite what some of your leaders might say) are another. Lastly, you can develop an interest in provincial politics - decreased government funding has been the root of many of these problems, and if you don't vote, politicians will think students don't care.

So, when you're scrounging for change in your couch to try and buy a box of Kraft dinner, or your TA doesn't have time to check email, do more than just get ferschnickered - get angry.

Liam McHugh-Russell is A mathie, but he tries hard anyway.

My Two-Cents



Jay Liu

3B Computer

It must be exciting to begin a new chapter in your life. Only a few months ago, you were among the thousands of anonymous high school kids who were being guided blindly through the dark hallways of RCH by yellow-shirted Waterloo volunteers. You said to yourself, "Well, I can see myself being here." You scratched your head, took a few pictures, and rode the 401 back to your cozy homes.

The next day, you fell in love with UofT. The beautiful campus. Computers that work. Arts hotties down the street.

Then your parents told you to either accept Waterloo's offer or get lost. Parents are always the smartest of people.

It really doesn't matter why you are here. People come to Waterloo engineering for a variety of reasons. Some can't afford MIT. Some heard rumours about academic excellence. Some were duped by the prospect of Microsoft internships. Regardless, now you are on your way to become a proud Waterloo grad, and unless something goes horribly wrong, what await you are the cruelest five years of your life.

It is not my intent to offer you any useful advice. If I had any, I would've traded those for something more useful than appreciation from first year students. Two excellent skills do stand out to being of some importance, and it would not be detrimental for them to be explained here as I attempt to brush up on my writing skills before my work report resubmit.

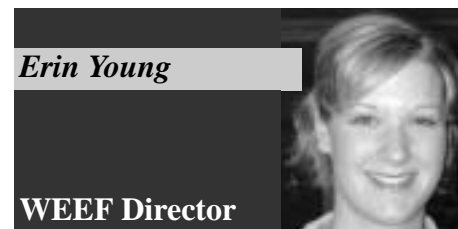
The first one is the ability to watch out for yourself while being lost in the day-to-day trivia of learning standardized engineering theories for the purpose of obtaining high marks on examinations where the maximum possible leeway for creativity is to decide between an idealized tool A and an obviously inferior but no less idealized tool B, which, to the confusion of many upper year students, is also occasionally named "A" or "not A". To maintain a healthy lifestyle, both mentally and physically, is essential. Since most of you would be living on your own, the absence of excessive nagging of your guardians needs to be counterbalanced by a strict sense of self-discipline. It takes time and

energy to stay sane, stay fit, and stay on top of school work at the same time. However, these are exactly the famed "life skills" that a postsecondary education is supposed to offer. Employers will give you all the technical training you need to do your job. They will not teach you how to avoid depending on Big Mac coupons for the rest of yourself.

The second important skill is not to get caught up in the engineering bubble. Engineering schools tend to be very enclosed environments. This is due to the rigid structures that our predecessors have created for us. The structures exist to be followed in order for us to be of competent service to the common man upon graduation. As you may have observed from your faculty-imposed course schedules, the number of electives is very limited, and that of non-technical ones even fewer. Conspiracy theorists reckon that this apparent governmental influence is present so that large quantities of identically-skilled workers can be cheaply assembled to not only meet the insatiable demand of the American Dream, but also to surplus generously for deployment in the Canadian and other underdeveloped economies around the world.

The mistake is to believe that we are in any way better than differently trained creatures on campus and elsewhere. There really is nothing holding you back from the temptation of feeling rather good about yourself right now. However, the coming five years, if done correctly, should be a definite eye-opener for most undergraduates. During these formative years, it is important that you truly embrace yourself to the other side of the world. Diversify your field of study. Dive into the subjects of liberal arts and social sciences without hesitation. An engineer who is well-informed and one who understands the importance of the world serves the society much more competently than someone who is narrow-minded and, to use a highly sensitive technical term, "nerdy". Economics will help you understand why Microsoft is dominating the world. Psychology will help you understand why we let Microsoft dominate the world. Philosophy will help you understand why Microsoft seems to be immortal. Only when you are capably armed with an understanding of the victor can you then confidently start to plot your own informed plan to challenge his reign. After all, if history has taught us anything, it is that no empire has lasted for ever.

7 Ways to Save Your Money in Frosh Year



Erin Young

WEEF Director

Okay, so you just got to Waterloo and you're probably wondering what to do with that big OSAP cheque or the line of credit you just received right? If you didn't notice, (because you were busy saying goodbye to 6875 of your closest high school friends or deciding which Justin Timberlake CD to bring with you,) your tuition was just over \$4200 this year, which for most of us is a good portion of our cash for the semester. It's agreed that you are going to have some tough times ahead of you, but here's 7 helpful hints on how to save cash during the semester so that you need not opt out of the health insurance (which will come very handy in Midterms when you need a note to get out of your

Chemistry exam,) or heaven forbid you could take back your WEEF money and earn

the title of "hey there's that cheap bast—d" for the rest of your engineering career.

Hint #1: Be friendly with your neighbour. Chances are he or she has stuff you forgot, and borrowing is cheaper than buying. Learn to share!

Hint #2: Make friends with upper year students. They will know the cheapest places to eat, drink, and where to do your laundry (if not in REZ.)

Hint #3: Make the most of your parents. If you are close enough to go home, or your parents do delivery you'll want to collect the following items: anything you can, including food, toiletries, and quarters. If you can't use it you can probably trade it.

Hint #4: Pre-drink. Enough said.

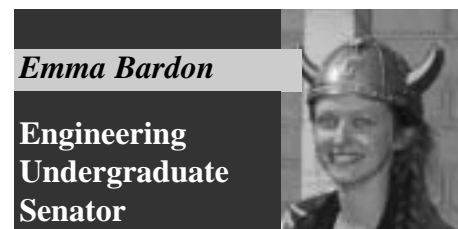
Hint #5: Go to any event that offers free food or beverage. Eat lots, pretend to listen, you might learn something, and make friends with upper years too!

Hint #6: Do all your photocopies at the orifice.

Hint #7: Apply for a bursary, you'd be surprised!

Catch you on the flip side!

UW Senate Report



Emma Bardon

Engineering Undergraduate Senator

The University of Waterloo Senate is the highest Academic body on campus. They control everything from determining the very existence of faculties and departments, to determining admission standards, to conferring honorary degrees. Whenever a program is modified (for example, an option is created), it must get approved by Senate before becoming official. Membership consists of student representatives from each faculty, as well as faculty members, the President and Provost, and members of the community. Meetings are held once a month, and are open to the public.

Current projects being undertaken by the student senators include: getting all course critiques from all faculties online, a

study on the impact of tuition levels on students at UW, and increased communications between the senate and the student body. Other issues that have been discussed include policies on admission to co-op programs given the current relatively low employment statistics, and looking into making the cap on bursaries reflective of the tuition paid as opposed to having a cap common to both regulated and deregulated programs.

The primary role of the student senator is to ensure that student voices are heard by administration. If you have any concerns with any academic issues on campus, let me know and I'll see what I can do - I'm here to represent you, so your opinions matter to me.

If you'd like to know more about senate and what it does, go to <http://www.adm.uwaterloo.ca/infosec/uwact/uwactsen.htm>.

If you'd like to keep posted on what the student senators are doing, visit <http://helmer.ca/mailman/listinfo/senate-consult> to be added to the mailing list.

Community

Live the Dream, Do an Exchange

Meagan Wheeler
4A Civil

I had a very interesting New Year's Day this year. I woke up at 5am, tripped over the large suitcase that lay on the floor beside my bed and threw on a sweatshirt and some cords as I hurried out of the house. The next thing I knew I was hugging my parents and boyfriend and passing through the gates at Pearson International on my way to South East Asia and the National University of Singapore (NUS).

After watching several friends go on exchange, including a few who went to NUS, I decided to check it out for myself and applied to complete the 4A term of my civil engineering degree in Singapore. I would recommend to anyone with the desire to travel to go on an exchange as part of their degree. The engineering faculty offers an amazing exchange program to a number of countries all over the world and it's a great way to meet new people, immerse yourself in a new culture and learn in a different education system.

I have to be honest and admit that I did miss my friends, family, and a good old Canadian winter at times, but overall it was an experience worth having. I met tonnes of people, including foreign students studying full time at NUS from places like Malaysia, China and India. I also met many other exchange students from all over the world.

I had a chance to experience the Hindu festivals Thaipusam and Pongal, see dancing Chinese lions, have my hands painted with henna, wear a sari, tour the Tiger Beer Brewery, make dumplings for Chinese New Year, visit the oldest Mosque on the island, go mountain biking and see a wild boar, visit a resort in Indonesia, spend weekends in Malaysia, tour Singapore's new state-of-the-art water reclamation plant, and experience what it's like to go to school on a tropical island where it

rained buckets for an hour every afternoon and was sunny and hot again by dinner. I also got to experience coffee with sweetened-condensed milk drank from a bag, eat shrimp dim sum and tom yam soup, and try Singapore's famous chili crab and black pepper crab.

The highlight of my trip was the spring break, which was spent with another exchange student in Cambodia. I was amazed by the magnificent temples of the 10th-15th Century Khmer Empire. Angkor Wat, the largest of these great stone temples, is the largest religious building in the world. Though almost a thousand years old, and slowly being consumed by the jungle, these buildings put me in awe at the accomplishments the Khmer people. We witnessed it all up close and from the back of a moto with some very friendly locals. I was equally horrified at the legacy left by the Khmer Rouge, who effectively sealed Cambodia off from the rest of the world as it upset the entire social structure of the country and committed genocide by brutally murdering over a million Cambodians (1/7 of the population) during their reign from 1975



Ryan Legg, a student from ISU also on exchange at NUS, in front of Angkor Wat

to 1979.

I will never forget the amazing places I saw, not the people I saw them with, but after having been home for four months, I sometimes wonder if it was all a dream. Go check out the engineering exchange web page and start dreaming! It's an excellent opportunity and I'd do it all over again given the chance.



Emma Bardon, Vice President, Education

What's Up with Co-op this Fall

Emma Bardon

Vice President,
Education



As some of you may know CECS (Co-operative Education and Career Services) is implementing a new, entirely online system for the co-op process. This was slated to begin in the Fall term of this year, but has been delayed to a Winter start. This means that all Engineers going through co-op this term will be using the Access system, as we have done for the last few terms.

During the fall, the system will be tested on Teaching and Architecture students. This happened over the Summer term as well, and will be repeated this term because of a change to the software.

Over the Fall, we will be running several co-op related seminars and workshops. A quick summary is below. For further details, look for posters.

Resume Critiques - this is an opportunity to get your resume checked out by a senior Engineering student who has been through co-op a few times and knows what employers might be looking for. It's also a chance to get it looked at by an extra set of eyes, no matter what level you're at. This will be held early on in the term.

Interview skills - never had a formal interview before? Want to brush up on some basic interview skills? This workshop will go over some of the basics you should know before any interview. Will be held shortly before interviews begin.

CECS.Online Intro session - since it's not starting up until winter, this will likely be late in the term. It'll review the new system, and go over some of the basics you might want to know before heading back to school next term, like what documents you'll need to create and a quick overview on how to make them.

Waterloo Through My Eyes: This Term Will Be Different

Christine McCullough
2B Chemical

Ah, the start of a new term. A blank slate; a fresh beginning. Late nights spent at the computer writing lab reports, mere hours before they are due, are a thing of the past. This term you will avoid that stress by getting a jump-start on that kind of thing. No more waiting until the day before the midterm to acquaint yourself with that expensive bundle of paper they call a textbook. Why, if you gave it the proper attention, you might even enjoy reading about partial differential equations. So that's it, this term will be different.

Right. While there are people that have been here longer than I and would experts in this area, I have been at this university for a long enough to understand its unique rhythm. And my experience tells me that this gung ho, take the term by storm, race to the top of the class attitude is part and parcel of the cycle of our higher education. So, stop now, put down the pen, chances are you don't need to write that acceptance speech for being awarded the Nobel Prize. Still convinced that by December your name will be spoken all over the world with great reverence for

your amazing work? Well, let me refresh your memory about the thought process the vast majority of us go through each term:

Week 1 - Have they ever given a 100% average to someone, because if they haven't, it's happening this term, and it's happening to me. My system is flawless and I am a machine. Roar. Watch out circuits/ PDE's / organic chemistry here I come.

Week 2 - I could go out to the Bomber this week, labs haven't started, and I have some of my assignments done...

Midterms - Exactly how did I get here? How did I let it slide so far? I can't believe this.

Post - midterms: See week 1.

Last Week - Screw it. I am so far gone it doesn't matter. I'm going to the bomber.

Finals - MUST PASS! MUST PASS! I wonder if my prof takes bribes...

Marks Posted on Quest - I don't even know how I got through that course, and I didn't deserve that mark, but I will take it. I am never letting this happen again.

Oh yeah, you know exactly what I am talking about, don't deny it. We've all been through it.

But wait, the situation is not hopeless. It may be possible to break the cycle. And since I have this incredible insight let my



A new term, a new start - or not

offer a couple of suggestions. First, it doesn't hurt to get organized. I know that word is off limits for some people, so I am going to say it again, organize. It will help. Second, don't set you goals so high that you have little chance of achieving them. If your average has never cracked 70%, chances are you won't come out of this term with a 90%, so set a more realistic goal. Lastly, ease up on yourself. You've probably heard every one of your

classmates say at one time or another "I don't know if I passed that one", but in the end they did pass. This program is tough enough as it is, you don't need to be constantly beating yourself up over every thing. Don't dwell on your less than stellar performances; pick yourself up, try to learn from your experience and make sure it doesn't happen again. In other words, make a few small changes and this term will be different.

Engineers Without Borders: A Volunteer's Story

Avi Caplan

EWB Volunteer
Uganda



The Northern part of Uganda - a country of 25 million bordering on Sudan, Democratic Republic of the Congo, Rwanda, Tanzania, and Kenya - has suffered for the past 17 years from what is referred to as "insecurity." Attacks and ambushes on civilians by the Lord's Resistance Army, a quasi-religious guerrilla force, disrupt agriculture and education. Women and children are abducted for use as human shields, to be taken as wives, or to be trained as soldiers. This summer, I've been working in Uganda as an Engineers Without Borders volunteer with Canadian Physicians for Aid and Relief (CPAR) on a project intended to increase the productive capacity of war-affected women and youth through the use of ICTs - information and communication technologies - and also to help build the ICT capacity of CPAR-Uganda as an organization. By the time you read this, I will have returned to Waterloo to begin the final year of a degree in Independent Studies. Needless to say, I've had quite a variety of interesting experiences in my three and a half months here.

Immediately upon arrival in Africa it became clear that technology is used in a bit of a different way. When boarding a small plane in Nairobi for the last leg of my journey, I was asked to step through a metal detector, but was not allowed to hand off my keys and wallet. It seems that the metal detector goes off for everyone, and then security frisks you if you look as if you might be a threat. In Toronto, by contrast, the roll of duct tape in my carry-on bag was cause for significant concern and was confiscated. I was told it would be destroyed as it "would make a great restraining device."

It also became clear in my first few days at and around the CPAR head office in Kampala, the capital of Uganda, that daily life here is quite different than what I'm used to. On the roads, for example, which are in quite different shape than Canadian ones, size rules the day. Vehicles don't slow down as they approach pedestrians, bicycles, or animals. Liberal use of the horn encourages smaller things to move or be moved. There's no such thing as a traffic bridge, and I can recall having seen only one set of traffic lights, but they weren't working. In order to get anywhere you just nose your way into a swarm of vehicles to open up a space to turn or to cross.

Up North in Lira, where the ICT learning centre is being established, motorized vehicles are less common. Bicycles and

bicycle taxis fill the roads, and most goods are moved with human power. What struck me most up country - besides the impossibility of reliable power, telephone, and Internet connections - is the poverty. Respectably-dressed co-workers go home at night to homes in disrepair, without running water or electricity, and where food is cooked outside over charcoal. One can only be sure of the availability in the way of food of some form of starch and some variety of meat, plus whatever local produce happens to be in season, and even a visitor with money is hardly assured of finding much of a selection. Not to say that such poverty doesn't exist in Kampala - far from it - but it's even more noticeable up country where a few dollars would feed an extended family. And everyone has a story of how the insecurity has affected them or someone they know.

One of the most exciting things I saw in Lira is the work of the director of a local FM station. White people such as him and myself, I should note, are very uncommon up country, and are followed with all eyes or called out to on the street for attention. He decided three years ago to stop talking about development and actually do something, and so shopped around for an old radio transmitter, hitchhiked to California to take it down off a tower, then set up a radio station that plays not only music, but also offers educational programming on subjects such as basic agricultural eco-

nomics. He also helped to set up a service whereby cell phones have been provided to each of the public markets in Uganda. There, they are used to report back regularly by text message the prices of major crops. This information is then published, announced over the radio, and made available at the cost of a single text message from any cell phone. The result is that farmers are now able to sell their goods where the demand is highest, whereas before they might have only gotten 50-70% of fair value due to a lack of information. He's using simple technology to make the market mechanism work.

In my short time here, I've been helping CPAR look at how this sort of information and communication technology can be used to help improve people's lives and implement a computer learning centre. There are no easy answers, and the problems we've faced have been not only technical, but also social and political. There's no question that much work remains to be done, but the resourcefulness and resilience of the people here has been nothing short of incredible.

Visit <http://waterloo.ewb.ca> to find out more about the Waterloo chapter of Engineers Without Borders.

A recent Human Rights Watch report on Uganda may also be of interest, and can be found at <http://www.hrw.org/reports/2003/uganda0703/>.



Scaffolding on a 5-story building in Kampala, Uganda.



Halted construction on Kampala International University



A typical Ugandan dwelling



A richer area of Kampala

ENGINEERING SOCIETY EXECUTIVE REPORTS

From the Prez's Desk



Josh Levitz

President (B-Soc)

Welcome first years to your new home. My name is Josh Levitz, and I'm your Engineering Society 'B' President. So before getting into the article, I know you must all have so many questions like "What is the engineering society?" or "why is there an EngSoc A and B?" or "How the #\$%& do I find my way out of this building". Hopefully most of your questions will be answered during this frosh week, but I'll get into a few small details here.

First of all, I want to say congratulations to all of you for making it here. You have the opportunity to study at the best engineering school in Canada, and I'm not just saying that because I go here. The next 5 years will be tough – I'm not going to lie to you – but they have the potential to be some of the best years of your life. It's ultimately up to you to make them just that, but there are many resources to help you out: TA's, professors, your peers, and of course EngSoc.

Essentially, EngSoc is a student council for all of engineering. Being president, I'm pretty much the main contact for administration, I sit on numerous committees, and along with my amazing exec, represent the Engineering Society. I'll just clarify the EngSoc A and B thing quickly before I go on: Because of co-op, half of you will be in school while the other half is working at any given time. Therefore we have two separate societies, with two absolutely fantastic and modest executives! You are all currently coming into B Society, but those who are doing 8 months of school straight will switch over to A in January.

So what is this EngSoc this guy won't shut up about? We're here to help you with academics, social life, co-op, and anything

Work and Studies



Emma Bardon

Vice President, Education (B-Soc)

Greetings from your friendly neighbourhood VP Ed. You might be wondering what exactly a Vice President of Education does here in UW Engineering. A lot of the work done is pretty invisible to the average student, but the impact can still be huge.

Workshops – this is probably the most visible aspect of the position. Every term we run workshops on things like car care, etiquette, and various co-op related ones such as resume critiques (get a senior student to go over your resume) and interview skills.

Course Critiques – a survey done in every class, every term to rate the course and the professor. The results of these sur-

veys actually impact the professor's salary, and even whether or not the prof will teach that course again. Summarized results are available to you in the Engineering Society Office.

Co-op Council – There is a council for co-op students, to deal with co-op related issues. A member of CECS (Co-operative Education and Career Services) staff sits on this council along with representatives from each faculty offering co-op. Believe it or not, they actually do care what the students think.

Josh Levitz
bsoc_prez@engmail.uwaterloo.ca



Debt-load surveys – As huge a financial help as co-op is, for many students, it doesn't cover all expenses. We provide a survey to students to help track the level of debt they are experiencing. There is currently a campus wide project in the works using these surveys to show the impact of the rapidly rising tuition on the students.

There's a lot more to the position, but that's a quick intro. For more information, see my other articles in this issue, or come talk to me anytime.

From the Horse's Mouth



Jeff Alfonsi

Vice President, External (B-Soc)

Welcome to the fabulous fall term. Why am I so enthusiastic about this fall school term? Well we have some wicked awesome events happening. In fact, you should probably cut this article out, photocopy it, and tape it to everything you own as a constant reminder of things you won't want to miss.

First off, we have a number of exhilarating guest speakers lined up for Bridging the Gap. If you are interested in augmenting your engineering education with a business or law degree be sure to mark down September 30th and October 7th, respectively, in your palm pilot, cell phone, UW agenda, or calendar. For you women, or men, there will be a number of women in engineering events, which have included movie nights and wine-and-cheese parties in the past. A few worthy candidates will also be selected to represent the university at the Women in Engineering Conference in Kingston this November. There are also other conferences and competitions for you to attend. The Canadian Federation of Engineering Students is hosting its annual conference in Victoria, BC. Applications will appear on the Engsoc website (<http://engsoc.uwaterloo.ca/www/>) sometime this term. On a more competitive note, the Ontario Engineering Competition is taking place at

Queen's university this winter. Deadlines for entries will be early December, so check with your department, or ask me, for details.

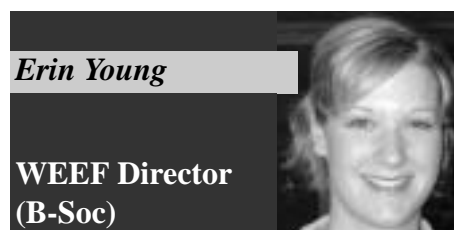
In additions to the aforementioned special events, there are always fun activities hosted by our Engsoc, such as a play, arts week, talent show, and sports. Furthermore, Engsoc presence extends beyond the university. We host Shadow Day, where high school students get a chance to experience a day as a Waterloo engineer, and we build and ride a float for the fantabulous Santa Claus parade. If you are interested in either event please let me know. On a university wide level, you can join the chess clubs, environmental club, or the acappella group (see <http://www.feds.ca/clubs/index.html> for the complete list). Your active participation will only make university life better.

Beyond the scope of the university, you can get involved with the Engineering Student Societies Council of Ontario (www.essco.ca) or join the Professional Engineers of Ontario (www.engineeringstudents.peo.on.ca) and the Ontario Society of Professional Engineers (www.students.osep.on.ca) as a student member. There is no membership fee and you get educated on issues pertaining to a professional engineer.

So enjoy a pig roast, some kus-kus, a hamburger, or a spring roll with a beer, martini, Perrier, or pop while tossing a Frisbee, aerobic, lacrosse ball, or your computer (out the window when it displays the windows blue screen of death for the eighth time) and smile. This is a great time in your life!



WEEF is Good!



Erin Young

WEEF Director (B-Soc)

Hi everyone! I'm your friendly blonde WEEF Rep! I hope you've had a safe and enjoyable summer. I will be making some class appearances during the first few weeks of the semester. I am going to approach each class with a 3 minute speech on why you shouldn't get your WEEF money refunded. It's going to highlight all the benefits each particular department has received in the past few terms, as well as a reminder about how it supports the many student teams which bring pride to Waterloo Engineering every year. I'm hoping this will help reduce the amount of refunds we have to give out this year.

Refunds will be staring during the second week of classes. If you do come to get your refund please be patient, we process them as quickly as possible. Bring the proper identification with you and look for signs on the WEEF door for information about specific times and dates (generally they will be running during lunch hours)

and more. I ask for your co-operation in order to make things run as smoothly as possible. Remember that the people processing the refunds are generously volunteering their time, and refunds will be mailed out at a later date to your address which is posted on the QUEST system. Any questions? Come see me, or email: weef@engmail.uwaterloo.ca

Due to disturbances in the economy in the past months we are dealing with a severely reduced budget for WEEF this semester. Therefore, it is increasingly more important now more than ever to keep your donation where it belongs.

Please come see me in the WEEF office (2nd floor of E2 near the Civil Lab) if you have any questions about WEEF, especially if you are looking to get involved.

Remember that each class has to designate a WEEF representative to attend a few short meetings during the course of the semester. You pay for your education so get involved, make choices, make things happen!

See you on campus!

Erin Young

ENGINEERING SOCIETY EXECUTIVE REPORTS

Having Fun is ... Good!

Matt Strickland

Vice President,
Internal (B-Soc)

The University of Waterloo's engineering program may very well be the death of you. I'm not even kidding. Well, it probably won't kill you, per say, but it could end up being some of the worst years of your life. Alright, hold on, I'm not inspiring too much confidence here. What I really mean is that it's incredibly easy to fall victim to scholastic tunnel vision: to concentrate all your time and energy on assignments, tutorial quizzes, and readings. To look up from your calculus textbook just long enough to grab a Coke and some onion rings from the V1 Cafeteria. Don't get me wrong, your principal reason for coming to university should be to further your education. Unless you're some sort of sophisticated homework robot, however, you'll probably find the next five years pretty dull if you choose to ignore all the clubs, teams, organization, activities, and events this campus has to offer.

This is where EngSoc, the University of Waterloo's Engineering Society, can help you. EngSoc is constantly working to make your life, as a UW student, easier and more enjoyable. The Society is responsible for such essential services as cheap photocopying, an online exam bank, and resume critiques. But furthermore, EngSoc organizes events that appeal to nearly every engineering student. Be it a charity fundraiser, talent show, semi-formal, drama production, art contest, or rock-paper-scissor tournament nearly everything fun that goes on in the engineering buildings falls under the directorship of the Engineering Society.

How can you get involved? Well, you've already taken a step in the right direction simply by cracking open this newspaper. Stay informed as to what's going on in UW Engineering. Read posters, check out our website (engsoc.uwaterloo.ca), sign-up to receive e-mail updates by joining the EngSoc General mailing list. And most importantly, take advantage of as many events as possible. Engineering soccer tournament this weekend? Talk to your classmates

about getting a team together. Is the engineering play coming up? Get a ticket for opening night. Bored between classes? Check out what movie's playing in POETS, the Engineering Society's two-story lounge. There's no better way to meet other engineering students.

If you feel like being even more active in EngSoc, consider becoming a class rep. Every class (e.g. Mech Eng '08) can send representatives and cast a vote at Engineering Society meetings. Class reps are crucial in relaying information to their classmates and voicing concerns to the Engineering Society. There is a strong tradition of class rivalries here in UW Engineering and it's important that your class decides on a name (e.g. "Syanide" - Systems Design '06) and work on establishing a website/ mailing list. Class reps play an important part in coordinating these things. Students who are interested in organizing a specific activity can get involved by becoming Directors. Directors are the people who make the world go 'round. They undertake a particular event (e.g. a wheelchair basketball tournament) and work to make it a reality. There are just shy of 100 directorship positions available and a few remain vacant as of this writing. Again, check out EngSoc's website for more information.

Finally, a few dates to mark on your calendar. On Wednesday, Sept. 10th, the Engineering Society's office (The Orifice) is holding an open house and, later on that night, is the first EngSoc meeting of the term. This is a great chance to see what the Society's all about and enjoy a delicious, free dinner. The following day, Sept. 11th, features two more open houses: come check out POETS, your engineering student lounge, as well as UW Engineering's very own darkroom. Finally, the week concludes on Friday, Sept. 12th with the Beginning of Term (BOT) Pub to be held in POETS that night. For more details, be on the lookout for posters throughout the engineering buildings.

On a campus as big as Waterloo's there are countless things going on at any given time. The Engineering Society is just one way you can stay busy and get to know both your classmates and upper year students. Take advantage of being at such a great university and get involved as much as you can.

Let the Learning Begin

Jonathan Fishbein

Vice President,
Education (A-Soc)

Greetings Frosh! Welcome to Engineering at Waterloo. You've probably heard here that our little school here is the one of the best (if not the very best) engineering schools in Canada! The Engineering Society Vice President Edumacation (as it's known in some circles) is your student representative on academic issues to the faculty administration. It is my job to look out for you educational issues like tuition, bursaries, scholarships, quality of education, and the like.

Some things to look forward to in the

winter terms are debt load surveys. For the past while, the engineering faculty has been putting out surveys to try to gauge the level of student debt within the engineering student body. This is your chance to tell the administration how the deregulated tuition hikes are affecting your ability to afford your education. There will be more information about these when the time comes in the winter term ... so don't you fret.

For all you 8-streamers out there who get to taste the joy we call the co-op system for the first time in the winter, don't worry. The Engineering Society will be running resume critique and interview skills workshop to make sure your well prepared to dive into the job market. Again watch for these at the start of the winter term.

Good Luck in 1A and see you in 1B!

Money, Money,...Money

Grant Hollohan

Vice President,
Finance (B-Soc)

Welcome to the frosh edition of my report. My name is Grant Hollohan and I'm your Vice President Finance. This spiel is packed full of good stuff especially for the frosh. So read on!

For the Frosh:

You paid \$14 to the Engineering Society because EngSoc does lots of great stuff for you. Get to know our services because they can be awesome! First of all, and likely most important to you financially, you can get the cheapest photocopies on campus in the EngSoc office (a.k.a. the Orifice). If you don't know where this is yet, it's down the hall from POETS, or better yet, ask your bigs or huges to show you. Copies only cost 5 cents to EngSoc members (that's you!). Take advantage of this service because EngSoc provides it to you at less than cost, so we actually eat up part of your cost to save you money. Also, if you need to make a phone call, EngSoc provides a phone for free local calls. It's in E2 by the SAE car, and it's the one on the right (the phone on the left is for on-campus calls only). Just dial '9' and away you go.

If you liked the Engineering stuff in your frosh kits you can buy more Engineering Novelties like shirts, car decals, beer-mugs, and other cool stuff from the Novelties shop (right beside POETS) or the Orifice.

Look around the Orifice to see all the other services we provide. After all, you pay for it all, so in effect it's your Orifice. I won't go into all the detail about what else happens in the Orifice, but EngSoc employs two full time people to help look after things for you: Mary and Betty. Get to know them too! They're really nice and helpful! Come on out and meet them the first Wednesday of the term at the Orifice Open House.

For everyone:

For anyone who wants to be a director this term, I'm going to be holding a quick half hour workshop for new directors that will tell you how to fill out your budget forms, and your expense sheets. That will be happening on Tuesday September 16 at 11:30 in the Orifice.

That's all I have to say... except that B**5 (i.e. B-Soc's Big Bad Bowling Bonanza) will be happening this year on Sept 28th. Stay tuned for details...

"Do not go where the path may lead; go instead where there is no path and leave a trail." --- Ralph Waldo Emerson

Everyone Loves Winter Activities

Kate Kelly

Vice President,
Internal (A-Soc)

To think, at this time last year I was one of you: a wide-eyed, confused, excited and totally innocent frosh. I remember, and I'm sure you're still experiencing the combination of excitement and slight panic at entering engineering at Waterloo. You might want to start panicking more.

My name is Kate Kelly, I'm going into 2A Electrical Engineering, and I'm also Vice President Internal of the University of Waterloo Engineering Society (EngSoc) A (I'm off-stream). Don't be shy if you see me around. Feel free to introduce yourself, ask questions, or just chat!

Engineering is all about what you make of it. Studying and working hard in your classes are the main reasons you are here, and try not to forget that. However, there is a whole other side to engineering that you can totally overlook if you decide to just focus on schoolwork. EngSoc runs a number of events throughout the semester, and by getting involved it's a wonderful opportunity to meet new people and have a lot of fun.

You'll soon be seeing signs for "BOT", our Beginning Of Term party, which takes place in POETS (Pi*s On Everything Tomorrow's Saturday), the engineering lounge in CPH foyer (they serve BEvERages at the "OT"'s and every Thursday and Friday). This is a great chance to see the TOOL, visit with friends, relax from school and of course meet more engineers!

You're soon going to be meeting your class; these are the people you are going to spend the next 5 years of your life with. You will make some very good friends. They will be the ones who will teach you how to do an important calculus problem,

or a computer algorithm the night before the midterm, so make sure you get to know them!

Also, get to know some upper year students, they have gone through the same courses and workload as you will be experiencing.

They are excellent resources and great friends. Don't hesitate to ask an upper year student questions or for advice, we're usually more than willing to comment on courses or Profs.

Get involved, it's fun! Check out the webpage <http://engsoc.uwaterloo.ca/www> for information on classes, upcoming events, and other things you can get involved in! Remember that if you have any questions, any of the Execs will be around to answer your questions!

"Studying and working hard in your classes are the main reasons you are here"

ENGINEERING SOCIETY EXECUTIVE REPORTS

Yet Another Exec Report

Laura Mooney

President (A-Soc)



Hello all! As we come 'round to another fall term, it's always great to see the new faces wandering around – some looking lost as they navigate these halls for the first time on their own, some looking nervous as they head into their first classes, but hopefully all looking happy after a great orientation week. In case you were worried that the fun stops after the first week, have no fear – there will be plenty going on through the next term, not

to mention the next 5 years, to keep anyone from being bored.

Since I'm offstream, I'll leave discussion of this term to my partner in crime, Josh Levitz. For those of you on 8-stream, I look forward to seeing you when you join A-Soc in the winter. Just be sure to drop by the EngSoc office and use the services that your EngSoc fee helps pay for, and come out to the events being put on. Have an idea for something new? We're always looking for ways to better serve Engineering students. Leave your legacy by starting something great!

So enjoy the rest of your first week on campus, and don't forget that the first EngSoc social event is Sunday night – don't miss it! It's bound to be full of laughs and fun.

WEEF is Great!

Michael Henheffer

WEEF Director (A-Soc)



Hey everyone, I'm Michael Henheffer and I am the WEEF Director for 'A' Soc(those of you in 8 stream will be on 'A' soc in the winter. WEEF stands for the Waterloo Engineering Endowment Foundation. This foundation has set up an undergraduate engineering endowment fund. Interest generated from the principal of this fund goes towards lab equipment for engineering and to support the student teams, such as Midnight Sun, UWAFT and many others in order to keep Waterloo Engineering as the pinnacle of engineering programs in Canada and to leave no doubt that it is the best in the world. The great thing about WEEF is that it is the students who decide what the money is spent on.

This leads to one of the ways in which you can help WEEF, and consequently help increase the quality of your own education. Each engineering class

has one representative on the funding council for WEEF. The funding council decides what the WEEF money should be spent on by regarding grants to the proposals that it feels will help Waterloo Engineering the most. So, if you would like to be at the heart of the allocation of over \$100 000 a year, you should run for WEEF representative when your class holds its elections.

The other way in which everyone can help WEEF in its quest to make our education the best it can possibly be is to make the donation to WEEF each and every term you are on campus. You may have noticed a \$75 voluntary student contribution on your fee statement and wondered what it is. Well, this is a donation to WEEF. The principal of the fund continues to grow as students make this donation each term. And of course, the more money in the principal, the more money WEEF can grant for years to come. I can't stress just how important it is that you make this donation(or rather don't get a refund). One statement that you will be hearing a lot is "WEEF is good!"

Visit www.weef.uwaterloo.ca for more information.

Happy to be 8-Stream

Nick Lawler

Vice President, External (A-Soc)



Welcome to Engineering at Waterloo! I'm Nick Lawler, the VP External for EngSoc "A". This means that when you 8-streamers come back to school in January, my fellow executive and I will be running the EngSoc show for the term. As the VP External, my job consists of keeping up relations with those who are outside UW Engineering life. Including other engineering societies and the general public. Lots of events are planned under my position. These include the Bus Push where we actually now "pull" a bus to raise money for the Big Sisters of Kitchener-Waterloo. This is an excellent event that can really help an important local charity (and it's a load of fun too!). For you first years reading this, the First Year Integration Conference (FYIC) is being held this February at the UWO. This is an excellent way to meet other first

year engineering students from across Ontario, and to learn about the great traditions engineering has to offer. Ten spots are open to only first year students, and all expenses are paid by the Dean's Office.

In the winter term an entire week is devoted across Canada to promoting Engineering pride and accomplishments in Canada. This week known as National Engineering Week (NEW) looks to be a fun filled week, including a very popular event called the National Pie Toss. In this event by donating a small fee, you can order a cream pie to be thrown in the face of a chosen victim...hmm...I mean friend. They can choose to redirect the pie for another small fee. You can see how the hilarity will ensue. In the last winter term this event raised a huge amount for charity. Well that is it for now, let me assure you that many more great events are planned for the winter term, but the space is too short to report them all!

Welcome, you are now part of a distinguished, and small group of those privileged enough to get an engineering degree from the University of Waterloo. Congratulations and have fun in your first term!

Welcome!

Rajat Suri

Vice President, Finance (A-Soc)



First of all, I'd like to welcome the new suckers...err I mean engineering students to five years of tonnes of fun and no work! Or was it the other way around? You'll find out soon enough!

A little introduction on my part. I'm the VP-Finance for those of you in Stream 8, which basically means I manage your money to ensure that it goes to all the right places (ie events like MudBowl and the engineering play, or subsidizing photo-

copies and C&D food) and to none of the wrong ones (ie "How To Give a Wedgie to the Dean" seminars). Each of you pays a refundable fee of 14\$ that goes into all these wonderful events and you can be sure I'll be hard at work to make sure not a penny is wasted.

I'll also be managing the budget, so if you have any ideas or suggestions, I'd be glad to take them at rsuri@engmail.uwaterloo.ca. My term as VP has just started, so I'll be around for another 16 months to take of your monetary needs!

So welcome to Waterloo, and I hope you have a great time here! (P.S. I'm a Huge for the YellowJackets group in Frosh Week, so if you feel any urge to scream at me for my corny writing in person... feel free!)



Sandford Fleming Foundation
E2 3322, ext 4008, sff@engmail
www.eng.uwaterloo.ca/~sff

Awards	Work Term Report Awards Convocation Medals Debates Departmental Award for Excellence in Design Dufault Award Teaching Assistantship Excellence Teaching Excellence Award Technical Speaker Competition Karen Mark Scholarship John Fisher Leadership Award W.R. Petri Engineering Award Wighton Fellowship
Financial Assistance	Six Exchange Awards Travel Grants Dr. F. Hecker Exchange Fellowship Emergency Loans
Presentations & Sponsorships	Bridging the Gap Ontario Engineering Competition Canadian Engineering Competition

Anyone wishing to learn more about the Foundation may contact the office

Where's This Frosh Week I've Heard So Much About?

James Kunz & Justin Bishop
SuperHuges

Tuesday
9-10 AM: Registration (Colour Group HQs - head towards Engineering to find out what colour group you're in - and RCH 209)
 - Students pay if they haven't already
 - Students receive frosh kit, hard hat, etc.
10-11:30: Meet Edcom/Scratch (Colour Group HQ, E2 1310)
 - Meet the education committee
 - Learn about the computing resources around campus
11:30-12:30: Department Lunches
 - Hear from their departments about academics
 * Civil, Enviro. Civil, and Geological Engineering
 RCH 301
 * Chemical Engineering
 DWE 1501/1502
 * Electrical and Computer Engineering
 DC 1350/DC 1351
 * Mechanical Engineering
 E2 1310 (WEEF Lab)
 * Mechatronics Engineering
 RCH 302
 * Software Engineering
 DC Courtyard
 * Systems Design Engineering
 E2 1303B
12:30-2:30: Services Tour (Dana Porter, Health Services, etc) and Single & Sexy (Hagey Hall Theatre)
2:30-4:30: Earn your Hard Hat (Grassy knoll behind Grad House)
 - A series of events culminating in the first years receiving a hard hat.
4:30-5:30: Aerial Photo (BMH Green)
 - Group photo

Wednesday
9:00-11:30: Junk Yard Wars (Village Green)
 - Similar to the TV show of the same name
11:30-12:30: Professional Reception
 - Lunch
 - Meet graduated engineers
12:30-2:30: Single & Sexy/Services Tour (See Tuesday)
2:30-5:30: Meet The Tool (Fed Hall)/Engineering 101 (Modern Languages)
 - Meet the engineering mascot
 - Meet first year office staff
8:00-2:00: Lunar Luau Pub Night
 - Hawaiian themed evening of fun and entertainment
Friday
7:00-2:00: Scavenger Hunt (Colour Group HQs)

Engineering Orientation Week Schedule

Time	Tuesday	Wednesday	Thursday	Friday
0900-0930	Registration (Colour Group Headquarters)	Junk Yard Wars (Village Green)	Sleep In (Bed)	
0930-1000	Meet Edcom / Scratch			
1000-1030		Department Lunches	ELPE (PAC)	
1030-1100	Professional Reception, Lunch			
1100-1130		Single & Sexy / Services Tour	Services Tour / Single & Sexy	
1130-1200	Earn Your Hard Hat (Ends 1615)			
1200-1230		Aerial Photo	Eng 101/Meet The TOOL	
1230-1300	Residence Activities and Sleep			
1300-1330		Residence Activities and Sleep	Dinner and Free Time	
1330-1400	Residence Activities and Sleep			
1400-1430		Residence Activities and Sleep	Dinner and Free Time	
1430-1500	Residence Activities and Sleep			Dinner and Free Time
1500-1530		Residence Activities and Sleep	Dinner and Free Time	
1530-1600	Residence Activities and Sleep			Dinner and Free Time
1600-1630		Residence Activities and Sleep	Dinner and Free Time	
1630-1700	Residence Activities and Sleep			Dinner and Free Time
1700-1730		Residence Activities and Sleep	Dinner and Free Time	
1730-1800	Residence Activities and Sleep			Dinner and Free Time
1800-1830		Residence Activities and Sleep	Dinner and Free Time	
1830-1900	Residence Activities and Sleep			Dinner and Free Time
1900-1930		Residence Activities and Sleep	Dinner and Free Time	
1930-2000	Residence Activities and Sleep			Dinner and Free Time
2000-0200		Lunar Luau		

Software Engineering Orientation Week Schedule

Time	Tuesday	Wednesday	Thursday	Friday	
0830-0900	Registration (DC 1302)	Sleep In			
0900-0930		Services Tour (Part 1 of 2)			
0930-1000	Meet Edcom / Scratch	Single and Sexy			Sleep In (Bed)
1000-1030					
1030-1100	Department Lunch (DC Courtyard)	Services Tour (Part 2 of 2)			
1100-1130					
1130-1200	Earn Your Tie	The Event Horizon			ELPE (PAC)
1200-1230					
1230-1300	Earn Your Hard Hat (Ends 1615)	Meet The TOOL			
1300-1330					
1330-1400	Aerial Photo	Meet The TOOL			
1400-1430					
1430-1500	Residence Activities and Sleep	Dinner and Free Time			
1500-1530					
1530-1600	Residence Activities and Sleep	Dinner and Free Time			
1600-1630					
1630-1700	Residence Activities and Sleep	Dinner and Free Time			
1700-1730					
1730-1800	Residence Activities and Sleep	Dinner and Free Time			
1800-1830					
1830-1900	Residence Activities and Sleep	Dinner and Free Time			
1900-1930					
1930-2000	Residence Activities and Sleep	Dinner and Free Time			
2000-0200			Lunar Luau		Team Dinner (DC 1301)
				Integral Space Search	

Important September Dates from CECS

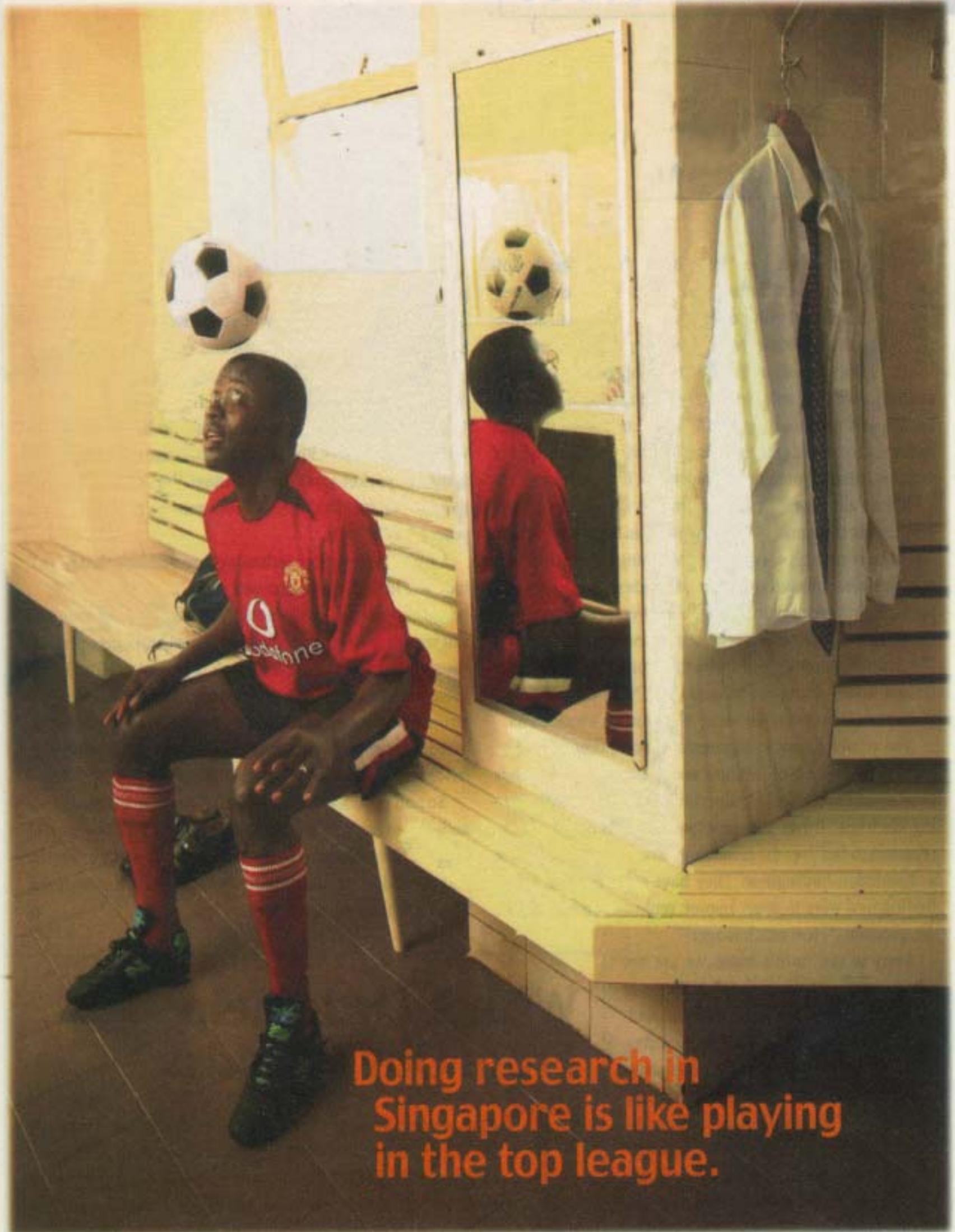
Krystina Benson
CECS

Sept. 16: "Master" Copy co-op record available after 10 AM
Sept. 17: Workshops:
 * Letter Writing: Learn how to use letters to your advantage in the job search.
 4:30-5:30 (TC Room 2218)
 * Resumes: Discover techniques for writing an effective resume.
 5:30-6:30 (TC Room 2218)
Sept. 18: Workshop:
 * Making the Career Fair Work for You: Learn the "do's" and "don'ts" of this excellent networking and work search opportunity.
 2:30-3:30 (TC Room 2218)

Sept. 19: POSTING #1 (includes Chartered Accounting)
 AVAILABLE BY 12 Noon
 Workshops:
 * Letter Writing: Learn how to use letters to your advantage in the job search.
 1:30-2:30 (TC Room 2218)
 * Resumes: Discover techniques for writing an effective resume.
 2:30-3:30 (TC Room 2218)
Sept. 22: POSTING #1 EXPIRES 8 PM
 * Hand in 1 copy pf resume package to CECS Drop Off Slot by 8 PM
 Workshops:
 * Making the Career Fair Work for You: Learn the "do's" and "don'ts" of this excellent networking and work search opportunity.
 10:30-11:30 (TC Room 1208)

Sept. 23: POSTING #2 (includes chartered accounting)
 AVAILABLE BY 12 Noon
 Workshops:
 * Own your own Business. All students interested in implementing their ideas are welcome! (regular-co-op-high tech-low tech-no tech) The Basics: This workshop will help you assess your readiness to start a business venture, and show you how to convert an idea to a commercial opportunity.
 4:30-5:30 (TC Room 2218)
Sept. 24: POSTING #2 EXPIRES 8 pm
 CAREER FAIR
 10:00 AM - 3:30 pm, RIM Park
 Workshop:
 * Thinking About Working Outside of Canada? This introductory workshop is

intended for students who are thinking about the possibility of an international work experience at some point in the future. It will help you determine your suitability, and provide some advice on beginning the process.
 3:30-4:30 (TC Room 1208)
Sept. 25: POSTING #3
 AVAILABLE BY 12 Noon
Sept. 26: POSTING #3 EXPIRES 8 PM
Sept. 29: POSTING #4
 AVAILABLE BY 12 Noon
 Workshops:
 * Interview Skills: Selling Your Skills. Don't stop at the fundamentals; you must also prove your skills in the interview.
 NOTE: Please attend only if you can stay the full two hours.
 3:30-5:30 (TC Room 2218)



Doing research in Singapore is like playing in the top league.

Dr Adekunle Adeyeye, a soccer enthusiast, made his big career move to the National University of Singapore as an Assistant Professor.

"I was struck by Singapore's educational excellence, economic vision and technological edge on my first visit in 1997. When I returned in 2000, I brought my wife because I am here to stay."

A top student in his homeland, Adeyeye spent eight exciting years at Trinity College, Cambridge University, where he was the first Nigerian to be elected as a research fellow. Moving to Singapore enables him to further his groundbreaking research in nanotechnology.

Adeyeye's work has endless applications, ranging from the computer and automotive to medical industry. All of which adds to his delight with the scientific advances he has made. Above all, he is also thrilled that Singapore's rising prominence as a high-tech hub is a magnet to world-class companies and scientists.

If you want to be exploring new frontiers in the research arena, visit www.contactsingapore.org.sg today. It could be a win-win situation for you and Singapore.

Singapore. Your world of possibilities.

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