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the IRON WARRIOR

THE NEWSPAPER OF THE UNIVERSITY OF WATERLOO ENGINEERING SOCIETY

<http://iwarrior.uwaterloo.ca/>

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Who is EDCOM?

Welcome Frosh! We are Wolfwood and Lady Godiva, the Heads of the Education Committee, better known as Headcom. We thought we would take this opportunity to do what we do best and educate you about the Waterloo Engineering Education Committee (Edcom).

Edcom is a very special group of upper year students hand-picked by the Dean of Engineering himself from the top 5% of each discipline each year. We are the best and the brightest Waterloo has to offer, which means we are the best and the brightest, period. Being intelligent isn't the only thing that qualifies a student for joining Edcom. We also participate actively in the Engineering Society (EngSoc), the Iron Warrior (the official UW Engineering newspaper), sports teams (yes, UW actually has some of those), clubs (check out the Federation of Students recognized clubs list at

<http://www.feds.uwaterloo.ca/clubs/>), and of course the many student teams you will get a chance to learn about on Wednesday at your Student Teams Lunch. We are everywhere. We do everything. We are the authority on everything in Waterloo Engineering. That is why we will also be your TAs when classes start.

Although we never smile, Edcom does find enjoyment in seeing Frosh (that would mean you) turn into real Waterloo Engineers. It is not easy and we are not just going to give it to you, but by the end of the week Edcom will decide IF you are worthy of calling yourself a Plummer. Earn your hardhat, impress us with your ENGenuity at Junkyard Wars, scavenge like no other at the Big Deal, and play hard with the Mathies at the Big Bang, it is all part of starting life in Waterloo Engineering.

There are three very important things every UW engineer should know - take notes, there will be a test later:

1. The TOOL, TOOL, big RIDGID wrench!

The Tool is the Engineering mascot at the University of Waterloo. That means it is YOUR mascot. This 60-inch wrench is made of Ridgid steel and is rumoured to weigh more than 300 pounds. It has been on many adventures, and if you are lucky you may get to be part of some of its future encounters. No one can touch the Tool unless he/she has an Iron Ring (that would be in 1628 days for you - start counting). Do not try to touch the Tool before you get your ring. The Tool

Bearers (the mysterious keepers of the Tool and all its secrets) will stop anyone not eligible from touching the Tool by any means necessary. That means pain. On Wednesday morning, you will get the opportunity to meet the Tool and get thunderstruck! Do NOT miss this event. Love the Tool and remember that it is YOUR mascot.

2. WEEF is good.

The \$75 Student Endowment Fund you may have noticed on your fee statement goes into the Waterloo Engineering Endowment Foundation (that is WEEF for those a little slow with the acronyms; don't worry, you'll get used to it since all engineers only speak in acronyms after a while). The \$75 contribution of every Waterloo Engineering student becomes part of a principle that is currently almost \$4.5 million! Each year, the interest is made available for student teams and departments to purchase equipment not available through other funding. Student representatives from each class decide which proposals will be allotted funds by watching presentations and discussing the proposals with his/her class. WEEF helps keep our classrooms and labs current (Edcom likes this) and our student teams among the best in the world (Edcom really likes this). You can be more involved in these decisions as the WEEF representative for your class (<http://www.weef.uwaterloo.ca/>). Headcom likes WEEF. Edcom likes WEEF. We expect you to like WEEF too.

3. EngSoc is fun.

The best way to get the most out of your university experience is to get involved. You want to get involved - Edcom loves involvement. So get involved in the Engineering Society (EngSoc). EngSoc is fun. Waterloo has two streams of students, so we have two societies: EngSoc "A" and EngSoc "B". Each society has Directorships for just about every taste: academic, community outreach, social and athletic. You can pick to get involved with whatever you like. Edcom does them all. You can also be an EngSoc representative for your class. If you just want to meet people, come out to EngSoc events. Watch the board outside the Orifice (the EngSoc office) for event and meeting announcements. Speaking of EngSoc events, Headcom expects that

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Lady Godiva file photo not available



Wolfwood file photo not available

Words of Welcome from the Super-Huges

Rahul Bhardwaj
Sarah Sirega
Super-Huges

Welcome to Orientation 2004! You've made it through the stressful process of applying and waiting to hear from universities and then having to pay that wonderful tuition bill. But now, finally, you're here at the University of Waterloo and enrolled in arguably the best engineering school in Canada!

So either you've just received your frosh kit and have started to read this while rifling through it or it's the end of orientation and you've finally decided to see what all was in that bag you got at the start of the week. Either way, take some time to read the information handed out during the first part of your journey here at UW - a journey that you have complete control over. Over the coming weeks and years,

you will meet and work with some of the smartest people in Canada in the way of classmates, professors and industry professionals. There will be opportunities for you to represent your class, faculty and university at regional, provincial and national competitions, both on teams and on advisory committees.

This faculty has numerous student teams available for people to participate on. Some of these award winning teams are the Alternative Fuels Team, Mini Baja, Formula SAE, Clean Snowmobile, Waterloo Aerial Robotics Group (WARG), Midnight Sun Solar Race Car and the Concrete Toboggan. Within the faculty there are a number of branches of national and international engineering groups such as Engineers Without Borders and the Institute for Electronics and Electrical Engineering (IEEE). Keep your eyes open for posters going up on the walls around engineering about these groups and their

recruiting meetings.

The Engineering Society (EngSoc), whose logo forms a large portion of the back of your leaders' shirts, is comprised of a number of executive and director positions filled by dedicated students. A number of services that are provided through the society include the use of the online examination bank, which allows you to view and download old midterms and finals, the coffee shop (C&D), offering a full range of food and drinks to get you through the long days, POETS, the faculty lounge and bar, complete with state of the art sound, a full entertainment system and foosball, and the engineering society office, providing photocopying, binding, and novelties.

Now, it is hard to make ends meet with the high tuition and cost of living these days, but there are a number of scholarships and bursaries available. As well,

many faculties (including this one) offer part time jobs to students as does the Federation of Students (FEDS). For those who are more politically inclined, FEDS student council has positions that you can apply for later in your career here.

Parts of all of these facets of life here at Waterloo will be presented to you during Orientation Week and afterwards, with many opportunities to explore the areas that interest you. 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.

That said, welcome to the University of Waterloo and to the Faculty of Engineering! We hope that you enjoy your time here!

Sincerely,

Rahul Bhardwaj and Sarah Sirega

Letter from the Editor

Andre Beltempo

3B Mechanical

Editor-in-Chief



Firstly, I'd like to welcome any new frosh to UW Engineering, and introduce you to the Iron Warrior, our own Engineering Newspaper. Be sure to check out the Iron Warrior for upcoming EngSoc events, funny articles, interesting stories, and maybe some lively debate. After all, the paper is written by other engineers. We are always looking for new staff and contributors, so I encourage you to come out to our first meeting. It will be held the second week of classes, just check the bulletin boards around Engineering! Also, remember that you don't have to be a staff member to be a contributor, so, if you have something you'd like to get published, send it to us at iwarrior@engmail. Enough for the advertising plug and onto the editorial:

It is my belief that engineering, much like the two other professional programs of law and medicine, is becoming too restrictive, too academic and overly specialized. The youngest of the three professional programs, engineering is already facing tremendous challenges that will mark how future engineers will be regarded by society. Engineers are known to be focused, technically knowledgeable problem solvers. This is both the benefit and bane of engineering, and is especially prevalent in engineering education as presented at the university level. Even in my meagre work experience, I have noticed irregularities that arise consistently when engineers apply themselves to a task. Although engineers may be focused, technically knowledgeable problem solvers, these same qualities tend to make them excessively specialized, generally uninformed solution optimizers. Before everybody tries to burn down the IW office, let me explain.

By focusing explicitly on the task at hand, the engineer misses innovative opportunities that may present themselves a level or two above the actual problem. No matter what task an engineer may perform, it's likely to be with a large team. No single person can understand fully all the technical aspects of the complicated systems that modern engineers design and build, yet this causes a serious problem with integration and application of the entire system. Historically, engineers had a fairly clear picture of the project they were working on, and had a much broader perspective on both it's direct application to society, and the reasons why it may or may not work. Otto and Stevenson knew how their early internal combustion or steam engines worked in their entirety, and were aware of their social implications, yet today it's unlikely that any single engineer at Pratt and Whitney clearly understands every sub-component of a jet engine. The reason for this is simply that all modern systems, be they bridges, chemical processors, generators or databases, are far too complex for a single person to assimilate. The solution over the last 50 years has been to become increasingly more specialized, with some individuals dedicated to minute details of astounding precision. The advantage to this system is that each sub-component of a large project is well handled, analyzed and designed. The problem that this presents is that no one understands the entire system. Engineers tend to be too deep, and avoid broad since they cannot know everything about everything. This leaves the peculiar situation of everybody knowing something about something, but no one knowing anything about everything. This results in a myriad of problems at the real world level

where the product meets the people.

This same trap has presented itself in both law and medicine, both of which are at the same level of specialization as engineering, that is to say they specialize endlessly without looking at the broader problem. The added problem that engineers face is that they are actually encouraged to focus and discouraged to ask why they may be doing what they're doing. Basically, because an engineer knows so much about widgets, he tends to not to question the necessity of widgets. Consider the example of an engineer in the early 50's building a power station. He was perfectly happy to design a system using coal. Coal was just as dirty then as it was now, however, the engineer would be reassured by the fact that a single coal fired plant has an incalculably small impact on the total atmosphere of the planet. What the engineer failed to consider in this decision is what would happen if hundreds of engineers were undertaking coal plant construction simultaneously, which of course, was what was occurring. Medicine and law have similar examples, with medicine struggling to deal with cause, while ignoring effect, and law content to lose itself in legal process, at the expense of rapid and just decisions.

As mentioned above, a serious problem is that engineers are encouraged to focus purely on the technical. The typical stereotype of an engineer is of an introverted, socially inept, uninformed nerd, who prefers to stay home rather than go out to bars. The danger that all engineers fall into is that they use their technical experience as a safety blanket to insulate themselves from the rest of the world. Think along the lines of "I don't need to know history/psychology/geography/English/any-other topic, because I can do triple integrals." This mentality isn't a fault of the engineer as an individual. From day one, high school guidance counselors insisted that the focus should be science and math, and that other subjects, though nice, weren't really important, cluttering up an already heavy schedule. The trend continues in University, where engineering students are bombarded with more technical knowledge than they know what to do with, yet most have not taken social science courses since grade 10. It's come to the point where we treat anything that isn't hard science with utter disdain and contempt. Why shouldn't we? Artsies have no idea how an internal combustion engine works, so why should I know/care how Canada's political system works? The attitude that anything non-technical is beneath an engineer is tacitly encouraged both by his peers and reinforced by the technical bias in the education system. Engineers who think like this are not thinking clearly, and it is time we removed the mantle of superiority. Technical expertise is an absolutely vital tool for any engineer, but it is simply that, a tool. Engineers need the technical knowledge provided to them in order to solve a problem. But the root of every problem is found in a societal context, be it getting from point A to point B, organizing stuff faster, getting rid of a headache, being able to see in the dark, etc. In solving a problem, and choosing how, the engineer has a direct effect on society. He may use technical experience and technology to solve the problem, but the problem remains a human one. Therefore, it is beneficial that he understands a little of society first before he sets off to solve it. An engineer with a total lack of knowledge of general societal issues is in no position to apply his copious technical knowledge to solve anything. Engineers should be interested in diverse fields outside of engineering, in order to gain a broader understanding of the effects of their decisions.

The final contention is that engineers are not even problem solvers any more. They

are merely optimizing existing systems that already solve existing, clearly defined, recognized problems. A professor actually said this in class once, to my complete and utter astonishment. I am personally of the belief that one can optimize a horse and carriage until one is blue in the face, but doing so will never result in an automobile. Again, the inability to back up and view the problem for what it is results in a narrow focus and stifles any innovation. When I arrived at Waterloo, one of my professors mentioned in passing that the program tends to breed conservative engineers. I agree with him, but it is my belief that this is a function of the field of engineering, and not specifically of our school. Improving specific aspects of existing designs is an excellent way to glean efficiency, and an excellent way to stifle any progress. This mindset has been honed to the point that the large modern corporations have a vested interest ensuring that their products remain remarkably similar, just with six different shades of red. It has reached such heights that it would cost too much to implement changes which may actually improve our lot. The next time you are in the mall or watching TV, examine everyday items, and ask yourself how different this item is today from it's 1950's incarnation, and then versus it's 1900 incarnation. Everyone would agree that someone going from 1954 to 2004 would have a much easier transition than someone going from 1904 to 1954. Basically, engineers have allowed themselves to become focused on solving problems within existing designs, and only rarely step back and attempt to address the problems these designs were meant to solve.

So, how can we break the cycle where engineers, despite being a technical elite, are caught in the trap of being excessively specific, generally uninformed solution optimizers? Firstly, we have to realize that engineers are really multi-talented people, with skills in all areas of life. Engineers have numerous interests, as evidenced in the various clubs, intramurals, plays, charity events and the like, which are organized and run by engineers. Additionally, engineers do have a social conscience, as shown by programs such as Engineers Without Borders. Where engineers run into a problem is that there is so little academic room in their 4 year programs that they cannot experience the diverse courses which may give them a more formal background in the humanities, social sciences or arts. The other great danger is that engineers revel entirely in their technical solutions. As powerful a tool as the equations are, it must be recognized that they are merely a step in the process of applying a solution to a real world problem, and that an engineers' responsibility does not stop at the equations, but where the end result meets the public. As young, creative, dynamic people entering the academic world of engineering, let's ensure that these energies do not become dulled by the constant bombardment of highly technical and seemingly conservative work. The best thing to do is ask the question "Why are we doing this?" and if the answer is "Because that's the way it's always been done," or "Because that's the way it is", then you know to step back for a minute and rethink the problem. Don't be afraid to look at the 'big picture'. Sometimes you might be the only one who does.

Questions? Comments?

We welcome letters and feedback from all our readers. Please email us at:

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the IRON WARRIOR

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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.

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Advice

LowRider versus High Rider: Advice from the Masters



Before we get to the real questions, High Rider and LowRider would both like to make announcements. High Rider is retiring. Sadly, this is High Rider's last set of questions. High Rider has failed to reveal any reasons for this sudden departure from the world of the advice columnist, but we can only suppose that someone found out who he was and sent a mail bomb in retribution for some supposedly bad advice.

LowRider is here to stay. Ask LowRider all of your questions by emailing him at UW_LowRider@hotmail.com.

Now, on to the questions and advice!

Dear Riders,

What the heck is this growth on my back side?

-Hugh Jazz

Dear Hugh Jazz,

I think you are one of those caught in a widespread epidemic of the so-called cranial-rectal inversion syndrome. The "Super Size Me" documentary merely skimmed the surface of our present societal malaise. This condition is characterized by shrinking brain size and expanding posteriors. I suggest immediate and drastic action. Talk to your local surgeon immediately. Good luck.

-High Rider

Dear Hugh,

I think that's probably the Frosh 15 that you've put on. Next time you're at the cafeteria, try to choose something healthy like broccoli with gravy on top instead of bacon with gravy on top. You could also try exercising or working out to get into shape. Here's the program that I do:

Bench Press

- 10 sets of half to three quarters of a rep
- use lots of weight
- make as much grunting noises and banging around as possible to burn extra calories

- be sure to sit on the bench in between sets, and stare at hotties in spandex, if

applicable.

Bicep Curls

- same principle as above, but be sure to use the "Squat Rack", which is really meant for bicep curls.

Hope that helps shed those extra pounds!

-LR

Dear Riders,

Why does Star Trek always go back to 1967 when they travel through time?

Dear Trekkie,

Your question professes complete ignorance of the Star Trek saga. As all true connoisseurs of the series know, in "The City on the Edge of Forever" Captain Kirk and his crew travel back in time to the 1930s, and in "Past Tense" Commander Sisko travels back to the year 2024. I could continue the list indefinitely, but the abysmal ignorance you have already displayed assures me that I should waste no further efforts attempting to educate you.

-High Rider

Dear Trekkie,

Let me guess: You're in Software "Engineering", right? Why don't you travel over to the 4th Year Chem Eng room and give me your lunch money?

-LR

Yo Riders,

What's the best video game to play on a school term, or on a work term, or while stoned?

Dear Gangrene-Brains,

Both on a school term and on a work term, my personal preference would be the game WarCraft III. The strategical intricacies of this game are as intellectually stimulating as anything as common as a video game can provide. However, it is highly improbable that I could predict the vulgar tastes of one such as yourself. I do suggest you heed this advice: do not squander your precious time on entertaining distractions

such as video games. I am fully convinced a person of your dismal intelligence will have insufficient time for any activities except school or work.

While I have never felt compelled to sink so low as to try artificial stimulants, I suggest you abandon the video games when stoned. Instead, try amusing yourself with a shiny coloured ball. In fact, I would not be surprised if such a toy would be more than adequate as entertainment for you even if you had not partaken of any drugs.

-High Rider

Dear Person,

Thank you for the simple, easily answerable question. The answers you seek are: Missile Command or Space Invaders, Wolfenstein 3D and Pong.

-LR

Dear Riders,

Why can't I find a date?

Dear Dateless,

Given the count and caliber of women at the University of Waterloo, the dating competition stands biased towards those sparse Hilberts, Armstrongs and Pushkins on campus. Ergo, there is no hope for you. If you are truly desperate, perhaps you should go to L'Universite de Montreal or New York State. Surely there you will manage to find a woman of your intellectual stature.

-High Rider

Dear Dateless,

Without more detailed information, I'm going to guess that you are just a loser with no confidence. Why do you have no confidence? I mean, come on! What's the matter with you? Pull [shake] yourself [shake] together [shake shake]!!

If that didn't do it, then you are a hopeless, hopeless loser. Wait until second or third year, then become a Frosh leader and hit on the chicks in your group. Many a loser has scored in that fashion.

-LR

Dear High and Low Riders,

Why are there people in the computer labs at 2 am?

Dear Beta-tester of Neural Software,

Reading your submission rivals the enthrallment one experiences while listen-

ing to an E&CE instructor semi-rigorously peddle engineering formulas with pitiful support of no mathematical formality, or to reading the fire exit sign above a door. I advise you to promptly lather yourself with glue and duck feed, and jump into Columbia Lake while kicking as many goose young as you can.

-High Rider

Dear Guy,

I'm getting sleepy, so the correct answer to your question is the exact opposite of whatever "High Rider" said.

-LR

Dear H. Rider,

I see you're enrolled in the co-op system, but you have not applied to any jobs. What's going on? - J.M.

Dear J.M.,

The co-op system must be the most flagrant fraud in existence. Of my many terms here at Waterloo, only less than half will have been filled through co-op, and they are easily the worse half. I am fortunate enough to pursue more worthy alternatives, although there is the forfeit of more than \$400 in order to avoid using this repugnant system.

I am the last person to unfairly generalize, but coop jobs stultify creativity, pervert your morals, cause permanent brain damage, increase suicide rates across the board, encourage the wanton use of hardcore drugs in order to escape such an iniquitous life, and rob you of your soul. Finally, and worst of all, it makes you look forward to your engineering classes as a respite from such a horrid existence. I could say much, much more, but I believe that is enough to answer your question.

-High Rider

Dear J-Dawg,

Whazzup, yo? I applied to jobs last term, so I don't know what this panizzle is about. Mind you, the job that I actually did wasn't much like the posted description at all, so maybe that's the problem. Whatever.

-LR

Continued on page 8. See Rider Advice

Computing Systems for Students



UWdir

The on-line campus directory (known as UWdir) contains contact information about members of the campus community (students, faculty and staff). Every member of the UW community has a unique userid (the UW userid) listed in UWdir. Your UW userid is used for all of your on-campus computer accounts. There is a password associated with each UWdir entry, and UWdir is used as an authentication service for many other institutional services on campus (e.g. Quest, JobMine, UW-ACE). You also use your

UWdir password to update your personal information in UWdir (www.uwdir.uwaterloo.ca). UWdir acts as an email forwarding service (not an actual email account). Email sent to youruserid@uwaterloo.ca is forwarded to the email account that you specify in the UWdir email field. University policy requires official email correspondence to be addressed to UW userids, so it is important that the UWdir email field is completed and directs mail to a reliable location. It is recommended that you put your on-campus email address in UWdir and check mail regularly on that account.

Student Systems

Your UWdir userid and password give you access to the following student administration systems. Quest (www.quest.uwaterloo.ca) is the student information system at UW. It's used for course enrollment, student

records, financial and administrative information. JobMine (www.jobmine.uwaterloo.ca) is the new on-line co-op job placement system. UW-ACE (www.uwace.uwaterloo.ca) is the UW Angel Course Environment, a new web-based course management system where some of your course materials may be located.

Computing Accounts

Waterloo Nexus is the main student computing environment, used by all six faculties. It is a large network of PCs running Windows, with a wide variety of software. Students may roam freely among most of the Nexus labs on campus. To separate your daily working account from your accounts on the student administrative systems, your Nexus account has a separate password. To enable your account and set the password, use the "New Users" link on the log-in screen of any Nexus

workstation. The form will ask for your UWdir/Quest password before enabling your Nexus account. Your Nexus account includes an email account on the faculty email server, engmail.uwaterloo.ca, and personal web space on www.eng.uwaterloo.ca/~youruserid. More information about Nexus and faculty help desk locations is found at www.nexus.uwaterloo.ca/usersguide.

Wireless Computing

UW has (almost) complete coverage for wireless computing. To connect via wireless to the campus network, you need to authenticate yourself with either your Nexus or UWdir/Quest password through a web page at www.laptop.uwaterloo.ca. More information about using your own PC to connect to campus computing services is available at www.ist.uwaterloo.ca/yourpc.

Columns

Tapping Your Intellectual Resources

Neil Gibson

Engineering Consulting

As you begin your studies here at the UWaterloo Faculty of Engineering, you will hear much about sources of help available to you. These are resources that are external to you and include TA's, professors, special classes, academic advisors and Engineering Counselling. As an Engineering Counsellor, I meet many first year students who are often experiencing their first-ever crisis as a student. Even though you have been told of the many sources of help available to you, many of you will be reluctant to access that help, for a variety of reasons. You may put on a strong facade and suffer in silence. Some of you may phone your parents ... that is only natural and wise. However, you may not be aware of the inner resources you possess. These you can tap into in the short term until you can make a counselling appointment or get in to see your first year advisor ... or you can use them to simply help you manage on your own. But you have to realize you have them and know how to identify them. Most of the students I meet don't realize they have these inner resources. Below are some of the common ones.

1. Name the Monster

This is simply a catchy phrase for confronting the "worst-case scenario". Many first year students come to see us expecting us to tell them the secrets of how to immediately solve whatever problem they are facing. Most often I start with "naming the monster", i.e. what is the fear underlying your current situation? Usually that is the fear of failure, e.g., failing a course, failing a term, being required to repeat, being required to withdraw. Before I get into short-term strategies to address the problem, I like to remind students of the importance of naming the ultimate fear.

Fear is a powerful emotion. Too often it leads to panic and unproductive worry. Fear can also be a very strong motivator for action, which is usually what is required to solve the problem at hand. I encourage students to confront the fear, identify the specifics of it, which may be the dread of disappointing your parents, or the shame of seeing grades beside your name that don't begin with the number 9. By confronting the fear you can then remind yourself that whatever happens, you will deal with it. You won't like it but you will survive it. You might even come out of it as a stronger person, but I will save that for later.

2. Take Inventory of your Strengths

Life is difficult. There, I said it. To get to this point in your life and academic career, you have obviously developed a number of inner resources. Some of the common ones might be: (a) performing under pressure, e.g. exams, sports competitions, music recitals or dramatic performances; (b) self-discipline, e.g. when all your friends were out having fun, you were able to delay gratification and focus on your studies, practices or rehearsals. Don't take self-discipline for granted ... you wouldn't be here without it; (c) adjusting to change and transition, e.g. some of you have moved around a lot in your life, some have emigrated from another country to Canada, some of you have survived a major tragedy at a relatively early age. Think about what strengths you discovered in having reached out for help or having helped someone else through a difficult time. We often discover what we are made of at such times.

3. Challenge your Conclusions

A great strategy for managing difficult times is to pay attention to the conclusions you are drawing from your current situation. If you think about it, events don't have meaning unto themselves. We

tend to attach meaning to events. For example, you might do poorly on your first exam. That is clearly not a good thing. However, by more closely examining your conclusions about this event, you will probably recognize some pretty faulty thinking: e.g., I'm failing out of my program; I'm stupid; I'm never going to be successful in university, etc. I try to help students recognize and challenge that thinking. Is there any solid evidence to support such thinking? Could you just as easily come up with many other conclusions? In counselling we refer to this strategy as "cognitive reframing", i.e. the process by which we examine the thoughts/conclusions associated with our emotions attached to events. There is usually little evidence to support the drastic conclusions we come up with in a time of stress. By challenging and reframing those conclusions you can more clearly define the problem and then take appropriate action to solve it. Otherwise, you can get bogged down in a lot of negative and inaccurate thinking.

4. View Problems as Opportunities

We live in a culture that worships happiness and immediate gratification. When things aren't going well we tend to conclude that there is something "wrong". We see a gap between what is happening and what we think should be happening and take a negative spin on it. Have you ever been going through tough times and actually asked yourself, "What opportunity do I have for growth in this situation?" I know it may sound trite, but many people, especially in conjunction with certain religious traditions, use this strategy. If you think about it, our lives consist of peaks and valleys. The easy times are the peaks but that is not when we develop our character. We do that in the valleys. Most of the time we, as counsellors, meet students in the valleys. We may not be able to "fix things" for you but we can help you navi-

gate through these valleys. We try to help students recognize their inner resources and also identify strategies for survival in the tough times. You can learn to train yourself to embrace problems (that doesn't mean "liking them") as additional opportunities for growth and learning. You might want to reflect back on a difficult time in your life and assess how you grew as a result.

5. Keep Things in Perspective

When you encounter academic difficulties ... especially when academics have always been your strength ... it is easy to lose perspective and panic. Having perspective, in this sense of the word, means the ability to not define yourself strictly in terms of your identity as a student. You are much more than that. You have other significant roles in your life beyond your student role, although for sure, that is probably the biggest part of who you are now. Still, the ability to address the problem at hand, i.e. improving your academic performance, requires gaining perspective. For some, this may come from religious or spiritual beliefs. For others, it may come from the ability not to isolate oneself but to connect to others socially or through some extra-curricular involvement. It might mean getting away for a weekend to visit friends or supportive family members. A change of scenery can often help you regain perspective. And of course, don't forget all the external resources mentioned above. A conversation with a counsellor or advisor can often help you broaden your view of things.

These are just some suggestions. You do possess internal resources to help you get through difficult times. You wouldn't be reading this now unless you did. At the same time, your greatest internal resource may end up being your willingness to access your external resources ... your willingness to ask for help.

Co-op Rankings: Helping Make Informed Decisions



You're probably meeting all sorts of different and diverse people over frosh week, but if there's one thing that is common amongst all the engineers you'll meet, it's that every one of them will have to go through coop. In fact that may be the reason that you chose the University of Waterloo; you want to gain real-life work experience in your field before you graduate.

In a couple of weeks, you'll get your resume ready, get acquainted with the coop system, and start doing interviews; you know, all the sort of jazz that you'll need to do in order to actually get a job. The only question is, what job are you going to get? Some jobs are obviously better than others, some will have you travelling all over the world and some will make you clean toilets -- well maybe it's not that bad, but how can you tell if a job is going to be good or bad from the short description that you get? That's

where several upper year students come in. They've created a student oriented community called Coop Rankings (<http://www.coopranks.com/>) to allow students to share their experiences with the coop program. You can find out how other people rated their experiences working for the job you're applying for (ie, what the job is really like), or what sort of questions are going to be asked during the interview for that job you really want. The goal of Coop Rankings is to help you find the best coop job that you can by providing you with the knowledge to make an informed decision throughout the coop process.

One section of Coop Rankings to definitely check out is the new one for coop communities. These communities will give you a chance to chat with upper year students about issues related to coop, such as the process itself or finding places to live and things to do during your work-term. If you ever have any questions for upper years about coop, you should start a discussion and see what you can learn from the responses. So if you want to be in the know, or have an edge over others who haven't heard about Coop Rankings, check them out at <http://www.coopranks.com/>.

Writing for the Iron Warrior



Last year, during my Frosh Week, after opening up the laundry bag with different items and books the first thing I looked at and read was the Frosh Edition of the Iron Warrior. During my five years in high school, I was always very involved in the school newspaper, from being a writer, to being a member of the Editorial Board, and was interested in seeing how my high school paper, "The Libermann Times" compared with the Iron Warrior. Wanting to keep doing things that I enjoy, I decided to join the Iron Warrior, with a little persuasion from my sister who was a member already.

The joy about writing for the Iron Warrior, is that it is a news medium that is not discriminatory to what your opinion is on certain world and school issues. In other words, it only censors what is very inappropriate material. You can write about practically anything that your mind is interested in from movies that you have seen, music you have heard, sports that you play and even political and religious

issues that arise on the world stage. Other school newspapers, which shall not be named here, are the same, but lack quality in their material, and tend to be very one sided the majority of the time.

Since nobody likes to just do or procrastinate from doing homework, writing for the Iron Warrior will also allow you to meet students from all departments in engineering. They are very supportive, and they will help you through your first year in university, which from what I heard and just experienced is quite the challenge.

I urge you to join the Iron Warrior, the meetings are typically Mondays at 5pm, so it is after school right before dinner, and you can throw out topics and ideas that you would like to write about. If you cannot attend the meeting, for whatever reason, then the editor and the staff can be easily reached by e-mail, at iwarrior@engmail.uwaterloo.ca. This is an opportunity that you should not refuse, because it also looks good on your resume, when applying for jobs through the co-op system. Balancing both school and hobbies is essential for success in university. I would like to wish you all the best of luck in your first year of university and hope to see you at the meetings.

Free Money!



Emma Bardon

4N Mechanical

So you've just dropped \$4500 on tuition and more for living expenses, all for just 4 months here at UW. Did you know you can get that money back and still get your education? Here's how!

Step 1: Apply for OSAP. You will not receive free money from the university unless you apply for OSAP. Being turned down for OSAP is okay – the university uses a different formula for determining funding levels. If you applied for OSAP last term, go to the student awards office to get the forms you need. If you didn't apply for OSAP last term, apply online at osap.gov.on.ca.

Step 1b: If you're not from Ontario, you'll have to apply for student aid in your home province/territory/country. It's a good idea to make an appointment to talk to someone at student awards, since different regions have different issues relating to student aid.

Step 2: Fill out a bursary form. These are available at the student awards office, and available online at www.adm.uwaterloo.ca/infoawards/forms.html. These must be returned by October 15th, and can just be put into the drop box at the student awards office (second floor of Needles Hall). There are a number of specific scholarships you can apply to as well if you want to.

Step 3: Go to studentawards.ca. They list a whole lot of both internal and external awards you could be eligible for. Some require some extra work (write a song about duct tape, write an essay on what you would do as prime minister, etc.), some reward particular activities (sports, affiliation with particular unions, etc.), and some are just based on financial need or marks.

Step 4: Revisit the student awards office to pick up your OSAP (if applicable). You will then have to visit the post office to send the forms.

Step 5: Cash cheque for scholarships or bursaries. If the university is going to give you money, they'll mail you a cheque. If they aren't, they'll send you a letter. If they decided you have "sufficient resources", you can appeal the decision.

Tip: Write letters to submit with your scholarship/bursary application. A letter on extracurricular activities is good, but even more important is one on your financial situation. Most people aren't fully explained by a form, so this is your opportunity to explain why you think you should get your money back.

Note: A bursary is like a scholarship in that you don't have to pay it back, but it's based on financial need rather than academic achievement (hurray!).

Want a Job? CECS Important Dates

September 14-16:
Return to Campus Interviews

September 15:
Return to Campus Interviews
JobMine Technical Help Tutorial
4:30-5:30 pm, AL 113

September 17:
JobMine Technical Help Tutorial
4:30-5:30 pm, AL 113

September 20:
JobMine Technical Help Tutorial
5:00-6:00 pm, AL 113
Work Reports due by 4 pm (some faculties differ- check with your undergrad office)

Career Services Workshops:
Letter Writing: Learn how to use letters to your advantage in the job search. Register online at www.careerservices.uwaterloo.ca
4:30-5:30 pm, TC 2218.

Résumé Writing: Discover techniques for writing an effective résumé. Register online at www.careerservices.uwaterloo.ca
5:30-6:30 pm, TC 2218.

Mastering the Personal Statement: Learn how to write a winning personal statement when applying to graduate and professional school programs. Register online at www.careerservices.uwaterloo.ca
3:30 - 4:30 pm, TC 1208

September 21:
JobMine Technical Help Tutorial
4:30-5:30 pm, AL 113
Part-time Job Fair
12 noon -2 pm, Great Hall SLC

Career Services Workshops:
Starting Your Own Business-The Basics: This workshop will help you assess your readiness to start a business venture, and show you how to convert an idea into a commercial opportunity. Register online at www.careerservices.uwaterloo.ca
5:30-6:30 pm, TC 1208

September 22:
Job postings (including ACCOUNTING) available at 6 am
Volunteer Fair
11 am -2 pm, Great Hall SLC

September 23:
Job postings (including ACCOUNTING) close at 11:59 pm

Career Services Workshops:

Making the Career Fair Work for You: Learn the "do's" and "don'ts" of this excellent networking and work search opportunity. Register online at www.careerservices.uwaterloo.ca
11:30 am - 12:30 pm, TC 2218

Law School Bound: Hear about best practices to prepare an effective law school application. Presentation by John Richardson. Register online at www.careerservices.uwaterloo.ca
1:30 - 2:30 pm, TC 2218

September 24:
Career Services Workshops:
Letter Writing: Learn how to use letters to your advantage in the job search. Register online at www.careerservices.uwaterloo.ca
2:30 - 3:30 pm, TC 2218

Résumé Writing: Discover techniques for writing an effective résumé. Register online at www.careerservices.uwaterloo.ca
3:30 - 4:30 pm, TC 2218

September 25:
Career Services Workshop:
Thinking about Med School: Increase your chances of a successful application to med school through appropriate undergraduate course selection, tactics for improving your grades, advice on paid/volunteer work and extracurricular activities, a clear plan to excel at the MCAT, and tips for the med school interview. Check the Career Services "Workshops & Events" Web site for registration details.
6 - 10 pm, TC 2218

September 27:
Job postings (including ACCOUNTING) available at 6 am
Work/Study Abroad Fair
11 am - 3 pm, Great Hall, SLC

Career Services Workshops:
Making the Career Fair Work for You: Learn the "do's" and "don'ts" of this excellent networking and search opportunity. Register online at www.careerservices.uwaterloo.ca
10:30 -11:30 am, TC 1208

NEW Personality Dimensions: Explore your personality preferences and how they relate to different kinds of careers – work, the people, the environment. NOTE – Participation is limited to 25 students. Register online at www.careerservices.uwaterloo.ca
3:30 - 5:30 pm, TC 2218

September 28:
Job postings (including ACCOUNTING) close at 11:59 pm

Career Services Workshops:
Starting Your Own Business – Next Steps: Picking up where "The Basics" left off, this workshop will offer a more in-depth discussion on start-up issues: strategy and operational tactics, marketing, finance, human resources, R & D. NOTE: This session is limited to 15 participants. Register online at www.careerservices.uwaterloo.ca
5:30 - 6:30 pm, TC 1208

September 29:
Job postings (including ACCOUNTING) available at 6 am
Career Fair
10 am - 3:30 pm, RIM Park, Waterloo

September 30: Job postings (including ACCOUNTING) close at 11:59 pm

Career Services Workshops:
Interview Skills: The Basics – Understand the fundamentals of successful interviewing. NOTE: Much of this information is similar to the CO-OP 101 Interview Skills session. Co-op students should attend only if they need a refresher. Register online at www.careerservices.uwaterloo.ca
3:30-4:30 pm, TC 2218

Interview Skills: Preparing for Questions- Discuss and learn from taped excerpts of actual interviews. Register online at www.careerservices.uwaterloo.ca
2:30 - 3:30 pm, TC 2218

Thinking about Graduate Studies?: Find out the steps to apply to graduate and professional schools. Program research, applications, references, interviews and the admission process will be discussed, as well as scholarship options. Register online at www.careerservices.uwaterloo.ca
2:30 - 3:30 pm, TC 2218.

Upcoming Events from EngSoc

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	Check out up-to-the-day event postings on the EngSoc website www.engsoc.uwaterloo.ca
23	24 HOLIDAY!!! Victoria Day	25 Genius Bowl	26	27	28 Havenger of Hearts	29 Havenger of Hearts	
30	31	1	2 EngSoc Meeting #3	3	4	5 Athletics Event	

ENGINEERING SOCIETY "A" EXECUTIVE REPORTS

President



Welcome to UW Engineering!

Hello, and congratulations on making it into UW Engineering! No matter what you end up doing afterwards, this term is bound to change your life. You'll find the next five years to be stressful at times, but a lot of fun, too.

Now that you're part of engineering, and subsequently the Engineering Society, there are tons of resources available to you to make your university experience your own. Everything from joining in on an event or two throughout the term right up to becoming a director or even an executive is open to you. The best advice I can give is to get out there, try some new things, and don't be afraid to take a chance on something you never thought you'd do!

Over the coming term, you may find that some things seem strange or just plain harder than you thought they would be. We have frosh mentors who you can turn to for advice and the exam and work report banks where you can find examples from upper year students. Of course, you're always more than welcome to drop by the Orifice (a.k.a. EngSoc office) and ask anyone in there if they can help you out!

So, you might be asking what the easiest way is to get involved. It's really simple - come out to EngSoc meetings. The first one will be coming up soon - just watch for the fluorescent posters in the halls advertising free dinner (and the meeting)!

VP Education Report



Welcome Frosh of the class of 2009. Wow, 2009! It may seem like a long time from now, but trust me; your years at University will fly by.

As you probably have guessed from the byline of this article, I'm Jonathan Fishbein and I am Vice President, Education of the EngSoc A here at UW. What does any of that mean, you ask. Well, what it basically boils down to is that the Vice President, Education (often fondly referred to as Edumacation or Acamademics) is your primary student representative on all educational matters that get passed by the Engineering Society.

This may sound like a boring job to you, but you're just Frosh so what do you know. Plus, it actually is a whole lot of fun. I get to sit on many committees within the faculty to ensure that student needs are being accurately represented in decisions relating to academics. I also get to work with the dean and the faculty administration to try implementing changes which will help make our time here at University better. I also, with my directors, run

VP-F



Welcome to Waterloo and five years of fun, frolic and sleep deprivation! You will surely have much fun on this joyous journey of cramming two hours before the exam and eating leftover Kraft Dinner. But don't get too anxious to start just yet! Let me introduce myself. I am Rajat Suri, your Vice President Finance for the Fall term. Basically, I control the money part of the Engineering Society, including the refundable 14\$ you give towards us, so that we can finance events for you, or provide you with services such as our website and exam bank, or give you free food at EngSoc meetings, or otherwise make you happy little campers.

The novelties shop (where you can buy all your engineering clothes or accessories) also comes underneath me and this term we plan to do something new and crazy... provide classes with class T-shirts! Nuts, eh? So get together with your class and decide what you'd like your clothing to look like, and Novelties will do all the work for you! We're nice guys, eh?

So yeah, that's me. If you have any questions, about finance or anything, please feel free to email me or stop me in the halls or call me up. I am a friend with benefits so a little respect might be in order... I enjoy being called Sir or The Great One (Your Majesty works on some days). You can also look for me in Frosh Week, I am the nerdy yet strangely good looking one in charge of Jungle Slate.

several workshops and resources to help you with everything from work reports to resumes.

So here's what you can look forward to from my side of the EngSoc circle this term. One of the major breakthroughs that recently occurred between EngSoc and the Engineering faculty is that results of professors critiques can now be posted on our website. I'll be working hard this term with the Dean's office to set up a system where EngSoc members will be able to view past critique results for their professors online, without the hassle of looking up the paper copies in the Orifice (EngSoc office for you newbies). Also, you are the first class to be required to complete the new online Professional Development courses during your co-op terms. Look for an information session given by the courses' development committee and hosted by EngSoc. The session will inform you what these courses are about and what you'll be required to do. If you happen to be a 4-stream student and will be getting a taste of working life 4 months from now, then watch for student-run Resume critiques and a session on UW's new co-op system, called JobMine.

Before I end this article, I want to remind you that there's more to University life than studying, and EngSoc is a great place to meet some people have some good, old-fashioned fun. So come out to the first EngSoc meeting and get involved!

VP-I



Welcome to Waterloo Engineering! Are you ready for five long years? Well, you've already taken the first step towards making them five good years, you're finding out what is going on socially! I'm part of the Engineering Society, or EngSoc for short, and you could say that I'm in charge of planning all the parties. Now, hopefully many of you just said "hooray! I like parties" and that's great, but maybe some of you said, "man, parties are crowded and loud", well don't worry, keep reading because there is stuff for you in here too!

So what does EngSoc do? Well we have a number of different roles, but you can read about the other ones in the other articles. As VP-I, I get to help directors set up different on-campus events. These can range from an Engineering Talent Show, to a Semi-Formal, to a Santa Claus Parade Float! Every week throughout the term activities will be run by EngSoc, activities YOU can participate in! Maybe you want to learn how to use a darkroom, or play in a three-on-three basketball tourney, it's all here! All you have to do is show up! But maybe you don't want to participate in events, so what else is offered by EngSoc? Well, there's an online exam bank where you can find old exams from the classes you're taking, or there are the photocopiers in the Orifice (the EngSoc office), or maybe you just want to go to POETS, the engineering lounge and watch TV....

The first week of classes you'll have five people (maybe six) myself included, come clumping into your class and tell you more about what you're now reading.

If none of what you've read interests you, why not check out the EngSoc web page (engsoc.uwaterloo.ca) and look at the calendar of events, you never know what you'll find! Be sure to keep reading the Iron Warrior for updates on what's happening that week, or find out what's going on around campus. The whiteboard next to the Orifice will also be updated to show events for that week. If you have any questions or want to help out, just e-mail me at asoc_vpint@engmail.uwaterloo.ca anytime! Just remember, all work and no play makes for a really dull five years.



VP-Ex



Welcome to Engineering at Waterloo! I'm Nick Lawler, the VP External for EngSoc "A". This means that for the next 4 months, 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, including the Santa Claus Parade Float. Waterloo Engineering puts on a great float to profile the great teams and accomplishments of the faculty and parade them for the whole city to see! Come out and help support the float by walking, waving and having a great time! Speaking of teams, we have many great student teams that you can be apart of. Look sometime this fall for an engineering student team day, where teams will be taking new recruits.

As the VP-X, I get to represent Waterloo "A" at conferences across the country. I also get to bring along fellow delegates, and some cool conferences are coming up this fall. Conferences include the CWIE (Conference on Women in Engineering) at Queens, as well as a conference at the Canadian Space Agency in Montreal with a focus on the future of Canadian space exploration. A major conference known as CFESC (Canadian Federation of Engineering Schools Congress) is slated for U of T in January. This conference sees representatives from engineering schools across Canada come together for a week of fun and discussion. Keep an ear to the ground, as I'll be looking to bring fellow delegates for these and even more conferences.

Well, that is it for now, let me assure you that many more great events are planned for the winter term, but this 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.

ENGINEERING
SOCIETY



Did you know you can earn valuable P**5 points for volunteering time at the C&D? Email Mary Bland at mbland@engmail.uwaterloo.ca to schedule your shift.

ENGINEERING SOCIETY “B” EXECUTIVE REPORTS

President



Karim Lallani
President

First off, congratulations on being accepted into the top engineering school in Canada. You should all be proud of yourselves. For all of you that are in 8-stream, you will be joining the EngSoc ‘B’ Society in January, which means that I will be your EngSoc Prez in 4 months! I’m looking forward to meeting you all in January. The biggest advice that I can give to all of you is to make sure that you balance your school work and everything else that you enjoy doing. If you study all of the time, you will not enjoy the full university experience. Try to get involved with the engineering society as well as clubs and intramural teams. The engineering society runs a lot of events including a talent show, bowling night, semi-formal, water fights, and much, much more. We also offer a lot of services just for you, including an online exam bank, resume critiquing service, and a coffee and donut (C&D) shop. I definitely recommend that you stop by the Orifice or POETS to meet your exec team, and find out how you can get involved with the Engineering Society. I wish you the best of luck in your first term!

VP-I



Andrea Rayner
Vice President, Internal - Elect

First off, I’d like to say welcome to all the frosh. For those of you on 8 stream, you’ll be get a chance to know myself and my exec a little better starting in January. It’s a little early right now to go into detail about all the wonderfully fun things that are in store for the Winter term, but this much I can tell you, it’s going to be a blast! If you are looking for a way to get involved a bit, we still have a few vacant directorships. Just check out the EngSoc website, and drop me an e-mail if anything strikes your fancy. If you have any questions at all during the term, feel free to e-mail me at aerayner@engmail. Have a great first term at UW, and remember, don’t stress out too much, have a little fun.

VP Finance Report



David Johnson
Vice President, Finance - Elect

To the Class of 2009: if I can offer you one piece of advice, wear sunscreen. Congratulations on being accepted into Waterloo Engineering. I hope you are all ready to work hard and play hard. My name is David Johnson, and I am the new B-Soc Vice President of Finance. So as you can guess I take care of the finances (big surprise there). I am really looking forward to meeting all the new faces this coming winter. EngSoc has a lot of great events planned, so for all you 8 streamers don’t burn yourselves out during your first semester. When you paid your tuition this year, you also paid an engineering society fee. You did this because the Engineering Society does lots of great stuff for you.

Just to name a few of the services: you can get the cheapest photocopies on campus in the EngSoc office (a.k.a. the Orifice). 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. You can buy Engineering Novelties like shirts, car decals, beer-mugs, and other cool stuff from the Novelties shop (right beside POETS) or from the Orifice. My favorite service is the online exam bank repository. It’s a collection of old exams that can be used to help you study. Make sure you 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. 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 very helpful! Have fun during frosh week and remember: always wear sunscreen. Trust me on this one!

WEEF IS GOOD

Ryan Walker
WEEF Director

WEEF IS GOOD.

If you don’t hear someone say that this week, you aren’t at any of the frosh week events or perhaps you thought they were saying “beef is good” and you can’t understand what they have against vegetarians. I’m here to tell you once again that WEEF IS GOOD.

So now that you know it is good, what is WEEF? The Waterloo Engineering Endowment Foundation was founded by

two engineering students, Avi Belinsky and John Vellinga, in 1990. The goal of WEEF is to continuously improve the educational environment for undergraduate engineering students, and maintain our outstanding reputation. This is done through the funding of laboratory equipment, student projects, computer upgrades and academic tools/teaching facilities.

Where does WEEF get its money? Every term on every engineering student’s tuition statement there is a \$75 WEEF donation included. This \$75 is fully tax deductible, which means you pay less tax on your hard earned work term cash. Your

donation is never spent! Instead it gets put into a pot of money that is invested. Only the interest on the principle is spent. This allows the fund to grow larger over the years and in turn earn more interest. The principle is now over \$5 million. This allows us to spend \$45,000 this term. WEEF also receives donations from Employer Matching Contribution (EMC) and engineering Alumni.

Your class will need to select a WEEF representative. This will be the person who

Continued on page 8. See WEEF



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

Columns

Engineering Societies

Rahul Bhardwaj

Super-Huge



Hey First Years,

On behalf of the ESSCO council I would like to welcome you to the world of Engineering in Ontario. By choosing to study Engineering at the University of Waterloo, you have become part of a family called an Engineering Society. Whether you realize it or not, you are also part of a bigger family: the Ontario Engineering Students.

You are about to begin a hard period of five years or an easy period of seven years of study that you will never forget. Of course, Waterloo Engineering students are unique in that we know how to work harder and play harder than any other group of students. Know that you are never alone. Everywhere you look, someone is there to help you out.

University Engineering societies were established as student organizations in order to help students communicate, organize, and provide services for fellow students. The Engineering Students Societies Council of Ontario was established for the same purpose, but deals with issues on a Society and Professional level. This organization consists of a representative from each of the fifteen Student Engineering Societies in Ontario and an executive elected from these schools. It is a resource for your Engineering Society, and in turn or you. We provide contact between the

Ontario schools for the purposes of exchanging ideas and resolving issues. But this is not all: ESSCO acts as a voice to communicate with the Engineering Societies in Ontario, in particular those which you will join after graduation.

The Ontario Society of Professional Engineers (OSPE, www.ospe.on.ca) and the Professional Engineers of Ontario (PEO, www.peo.on.ca) are two major organizations which ESSCO deals with on a regular basis. Both organizations offer student memberships. I highly recommend that you join their programs.

ESSCO invites students to participate in our events, such as Engineering & Physics Day, and our conferences by way of our members' link ([join at http://www.essco.ca/link.php](http://www.essco.ca/link.php)). These conferences occur throughout the year, and will be advertised by the VP-External in your local Engineering Society.

For first year students, ESSCO works in conjunction with the First Year Integration Conference (FYIC). This incredible conference will take place at Ryerson University this year. It is a great way to get to know your fellow Ontario Engineers, and to find out what they can do for you and what you can do for your school, your province and your country. See you there!

To find out more about ESSCO and its activities contact your VP External for the Fall Term, Nick Lawler (asoc_vpext@engmail.uwaterloo.ca), whom you may recognize as the crazy Jungle Slate Huge for Frosh Week :)

Also, don't forget to visit our website at www.essco.ca, and feel free to contact me at rnbhardw@uwaterloo.ca, with any questions or concerns you may have.

It's the FEDS!

Jeff Henry

FEDS
VP Education

Since everyone else in this issue and this week will be welcoming you to the University of Waterloo, I will start with something different. Congratulations on picking up the premier faculty-oriented student newspaper on campus. The Iron Warrior is your opportunity to test out the artistic side of your engineering mind so drop into the office in CPH 1323B or drop an email to the editor at iwarrior@engmail.uwaterloo.ca and find out how you can get involved in anything from writing the latest feature to photo editing, to layout, to technical support.

From experience, I can tell you that the path to the Iron Ring is an incredible journey, and certainly an emotional rollercoaster. You'll have highs and lows, from finishing that final exam and handing in that brutal assignment to long nights in the lab and eating plaza food yet again. But at the end of the term and at the end of the journey, you'll have a sense of accomplishment and friends for a lifetime. Both the Engineering Society and the Federation of Students (FEDS) are here to make sure that journey is as rewarding, as entertaining, and as diverse as possible. After all, it is those extra-curricular diversions from the path to the Ring that you'll remember long after you've left the concrete passages of Waterloo.

So, what does the FEDS offer?

Located in the Student Life Centre

across from Tim Horton's, the FEDS oversee more than 150 clubs and 9 student services. FEDS clubs range from Quiz Bowl to the Chess Club to the Waterloo Space Society. Services available include the Off-Campus Dons, the UW Sustainability Project, Co-op Student Services, and the Gays and Lesbians of Waterloo (GLOW). A complete listing of clubs and services is available on the Federation of Students website, www.feds.ca.

I encourage you to discover the student-run businesses, owned and operated by UW students. Aussies is your convenience store located Down Under (in the basement of the Student Life Centre); at the Used Bookstore (around the corner from Aussies) you can buy and sell textbooks; on hot days you can buy cold treats from Scoops; you can drop by the Bombshelter for lunch; and attend concerts and special events at Federation Hall.

FEDS also has a students' council, which has representatives from each faculty. Bring your concerns, comments, or questions to your councillors to have your views represented around the council table. Your councillors this year are: Kunal Gupta (k3gupta@uwaterloo.ca), Laura Mooney (lmooney@engmail.uwaterloo.ca), Anubhav Srivastava (alsrivas@engmail.uwaterloo.ca), Jon Fishbein (jfishbei@engmail.uwaterloo.ca), and Matt Strickland (lstrickl@engmail.uwaterloo.ca). The next council election will take place in February 2005 – feel free to put your own name forward and get involved. In the meantime, there are plenty of opportunities to volunteer, be sure to check out <http://www.feds.ca> or visit any of your executive in the FEDS office, SLC 1102.

Space Society Skydiving

Sarah-Beth Doner
2B English

Members of the Waterloo Space Society dream of the chance to travel into the cosmos and perform a space walk. On July 10th, they did the next best thing: skydiving.

Thirteen members of the Waterloo Space Society, a FEDS Club, piled into three cars and drove north for two hours. Their destination was Skydive Toronto, which, despite the name, is actually located north of Barrie. Once they arrived, the adventure began.

This was the first time skydiving for most of the members. The only experienced jumper performed her third and fourth solo jumps from 4000 feet. All of the new jumpers opted for tandem skydiving where they were attached to an experienced skydive instructor during their jumps from an altitude of 10 500 feet. This style of jump includes a thirty second freefall during which the divers plummet over 4000 feet.

Before any of the excitement could begin, all of the new jumpers had to participate in training. This consisted of watching two videos that warned of the mishaps that could occur if you did not do what you were taught by your tandem instructor. The most memorable lesson was to keep your feet up when you and your instructor were landing. If you did not, you could expect to slide along the ground on your face with your tandem instructor riding you like a human boogie board.

After the videos, each jumper got some one-on-one time with their tandem instructor. During that time, they learned how to jump from the plane, and discussed the

types of manoeuvres that they wanted to perform in the air. This included a front flip when jumping from the plane, 360 degree spins once the parachute was deployed, and a fast landing. According to Karan Rustagi, the WSS Math Representative, "I was nagging my instructor for two things: a somersault (when jumping from the plane) and a fast landing. I got a somersault. The landing was gentle."

WSS member Mau Barrow was one of the first people to jump. With her fellow WSS Members (and her parents) watching from the ground below, Mau leapt from the Cessna airplane at 10 500 feet, strapped to her instructor, Paul. They did a barrel roll from the plane and performed their freefall. When Mau reached 6000 feet, according to

the altimeter strapped to her arm, her instructor signaled her to pull the ripcord. Mau recalls that moment with awe: "Wow. Can we talk cool? Suddenly my entire body seems to jerk

upwards. My feet were tingling as the chute opened. The most amazing thing about the actual gliding was the silence up there." With the help of her instructor, Mau performed several quick 360 degree spins which actually made her feel sick. "But the spinning is so cool!" she recalls. "I'm not about to stop it! In the one spin, we descended a thousand feet!" Mau touched down gently and safely, and other than the nausea, she was no worse for wear.

The Waterloo Space Society plans to organize another skydiving trip during the next summer term, if not sooner. They hope to attract more first time skydivers and fill the need of those who can't wait to go again. This includes WSS member Philiz Goh, who professed, "I am in the wrong profession! Who wants to go again!?!?"



Rider Advice Continues...

...continued from Page 3.

Dear High Rider,

If you owe a bookkeeper \$50,000, and you don't pay him, and he shoots off your foot, why do you still owe him the money? -i.m. limpy

Dear Limpy,

I was going to comment extensively on the interconnectedness of the laissez faire economy, the astute observations of Machiavelli on Florentine politics, and your current difficulties. However, I have just realized that, from the sound of it, you are not likely to pay this \$50 000 anytime

soon, leading me to infer that in the not so distant future, other and more essential parts of you will be obliterated in the same manner. Thus, you can hardly benefit from my wisdom.

High Rider

Dear Limpy,

The real question here is why aren't you going "double or nothing" at this point? You have another foot, right? The worst that could happen is that you lose again and owe him 100 grand. Then you can apply for OSAP and they'll bail you out for sure. Not even OSAP would turn down an amputee with that much debt, but I'd advise you to keep your marks up just in case.- LR

EdCom

...continued from Page 1.

ALL of you will be at the first EngSoc event of the term: ComEng. On Sunday night at 8 pm in South Campus Hall, the Engineering Comedy (ComEng) night presented by EngSoc is an evening of laughter and socializing before classes begin. Come out and get involved.

That should be enough information to get you started. Remember to have fun, meet people, ask questions and be safe. If you don't, Edcom will not be happy and you wouldn't want that.

WEEF

...continued from Page 5.

will share your class' opinion at the funding council meetings where funding is allocated. When you choose other class reps, do not forget to choose a WEEF rep.

Congratulations on being accepted here and I wish you all the best. Remember that engineering is the hardest 5 or the best 7 years of your life. If you have any questions, concerns or would like to volunteer some time, contact me at weef@engmail.uwaterloo.ca. One last reminder... WEEF IS GOOD!