Engineering Evening Excursion  
Keepin’ It Real: Friday, March 4th

It is time for this semester’s only EEE, so come grab a ticket before they’re gone. Cost is $15 and includes awesome tasty beverages at the kick off party from both large metal containers and from a certain frozen drink machine for those with more refined tastes.

Stops at the three amazing venues, free cover (which is awesome, obviously), an awesome T-shirt and awesome buses between stops.

Tickets are available to anyone (at UVic or not) and go on sale starting February 28th either in person at the ESS office or online in the estore. It’s going to be..., wait for it... real awesome! Tickets are limited and will sell out. Must be legal drinking age to attend.

Questions, concerns or expressions of joyous emotion can be directed to Nigel at essb-eve@engr.uvic.ca.

Order of Pi

Do you like pie? Do you like seeing people getting pied in the face? Do you like contributing positively to charitable causes? Of course you do! So check out page two for detailed information on this March event.

Important Dates

The last day to drop courses without penalty of failure is February 28th. That is TODAY!
Here Yee Here Yee:

The Time of Judgment is upon you. The Order of Pi has cometh to formeth again to bringeth those who are deemed worthy to cream filled justice. During the week of March 14th, 2011, The Order will be serving up their brand of pastry punishment. No one is safe from the savoury wrath of the sacred Order of Pi.

Have you a worthy candidate for the Order to maketh repent for their unsweetened ways? Then pledge your funds by phone, online, or by person, to the Engineering Student Society. All proceeds will go to the Queen Alexandra Children’s Hospital. There is a minimum donation of $10, but feel free to donate more. The proceeds will be donated to children in need.

Be warned if you are chosen by your peers for juicy justice, you will be found by the Order. Your only chance is to beat the original donation by $5. If you cannot produce the cash on the spot!!! LET THE PI HAVE MERCY ON YOUR SOUL !!!

Phone: 250-721-8822

Web Page: www.engr.uvic.ca/~pi

SLUSHIE FRIDAYS

Slushies Are Free!
Cups Are 50¢
Every Friday, In The ESS Office
UVSS Elections

The Spring 2011 UVSS and Senate elections are underway and it’s time again for us engineering students to take ten minutes out of our busy schedules to get a little educated and vote. To be honest, I’d much rather write about interesting and relevant engineering-specific topics, but some really important issues happen to be at stake in this round of elections. Unhappily, I’ll spend most of this time describing the direction I think we should avoid, because that’s what usually matters most to students who are too busy with their studies to be involved in student politics: what candidates can I trust not to do something ridiculous?

When the students we elect do something inappropriate or overreaching, there can be consequences; student leaders at UVic have been known to ban the military from career days, censor pro-life students, and boycott Maclean’s magazine (ironic considering Freedom to Read Week just ended). Actually, the incidents I just mentioned account for most of the UVSS’ newsworthy stories (CFS defederations, bunny exterminations and lip-dub celebrations aside). Some of these controversial actions have even resulted in legal costs that increase the debt being passed on to students through mandatory fees.

But I’m afraid that determining who can be trusted not to make fools of us isn’t easy; students who are elected act the way they do partly because student government is isolated from influences (such as reasonable voter turnout) that might make people act more reasonably, and partly because they are inexperienced. Also, candidates form groups called “slates” instead of parties, which means that political promises (to be level-headed, for instance) mean even less than they do in regular politics; elected students can do whatever they please. But the best way to offset the inherent uncertainty of student politics is still to look at how candidates have acted in the past.

As promised, I will point out the direction we should consider avoiding: Fuse. This slate is comprised of individuals who, although they are generally...
Engineering Fortress Stood Tall Over Petch Fountain

Wednesday February 25, 2011 could have been just another day in Victoria, but not this year, this year there was snow on the ground. At UVic, many of those students who had not deserted the city for Reading Break could be found trudging through the wind and snow to and from locations of shelter, warmth, and the unfortunate responsibilities of homework. However, not everyone on campus looked upon the snow as an inconvenience, some looked upon the snow with the eye of opportunity! This is the tale of those students.

Mustered by Noel Bacani and Kyle Moss in the early afternoon, a group of eager engineering students set forth to the Quad to construct a snow structure of unparalleled proportions. However, through a strange turn of events (mostly attributed to the dreadful cell reception in the ESS office), the group became unknowingly split in two. While one team began construction of a Rubik’s cube like structure on the knoll adjacent to the Elliott building, the other started building a fortress in the Petch fountain, hidden from view of the first team by the Fountain itself. Progress on both structures continued into the mid afternoon until, after surviving a snowball barrage from some rather hostile passersby, the team on the knoll was alerted to the presence of the team in the fountain. Within minutes the teams had shared stories and developed a master plan. By deconstructing the Rubik's Cube one recycling bin sized block at a time and transporting the pieces to the upper part of the Petch Fountain, a new component of the fortress was born.

With all hands busy at work, snow blocks – crafted using recycling bins from nearby classrooms and cafeteria trays kindly donated by the Bibliocafe – were quickly added to the fortress. With the assistance of reinforcing snow mortar, the blocks were assembled with success, and the master plan came to fruition. As the daylight waned and arms grew cold and weary construction came to a close. The snow fortress was almost done. As a final touch, a large vibrant orange decoration was added. The decoration was simple consisting of only the letter ‘PI’ and the message UVic ERTW.

Thus the fortress was complete and the builders returned from whence they came to relax, warm up, and enjoy the satisfaction of having made the most of what could have been just another February day in Victoria.

- J. Grove

Picture By Paul Hunter

UVic Peer Helping

Are classes getting to be too much? Are you assignments piling up? Do you have exams coming up and you’re not sure how you are going to find the time to study for them all? Anything else? The UVic Peer Helpers can help you out. We’re here to help you with academic success, wellness, student transitioning and lifestyle issues. There are two offices on campus open Monday through Friday: One in the basement of the SUB, open from 10:30–3:30 and the other is located in the library learning commons, open from 10:30-4:30. We’re here to listen!
CFES and Relentless Engineering Stereotypes

The common engineering stereotype is that of a solitary person; one who isn’t all that good in social situations and feels more comfortable working with numbers than people. I find this at odds with the other common stereotype of engineering students as beer drinking party. How is it that engineers can carry the stigma of excessive drinking and socializing while at the same time being socially awkward? I spent my first week of January, as I have every year of my undergraduate degree, at the Canadian Federation of Engineering Students annual Congress. This event brings around 200 of the country’s finest engineering students from coast to coast. The first thing you will notice at these events is that we don’t look like engineers; we look like every other student you know. Our jokes however do contain more triple integrals than the arts students. This past year was held on the east coast, in St. John’s NL. If you are free next year and want to meet some of the most amazing people you will ever meet, come by Whitehorse in 2012.

I have been very lucky to be a part of the CFES; it’s rare to be in a place with so much talent and inspiring people. When you put so many intelligent people in close proximity to each other you truly understand what it means to be a free thinker. You have to open your mind when chances are that the person next to you knows more than you do. At these engineering meetings, everyone is there to learn, everyone is on the same playing field, everyone wants to be there, and everyone contributes in some form.

It’s been suggested in the past that engineering students should try and clean up their act and start acting more professional. The idea that we are somehow degrading the profession by hosting over the top social events is a constant hum whispered to us from faculty members.

The idea that being human and being allowed to find our own way somehow makes us less of an engineer has made its way into the academic consciousness. Even some students have voiced their opinion that engineering students and student groups should focus on only what’s presented in the course outline. This is absolutely absurd. The environment that the CFES and groups like it provide to its members is incredibly valuable. An environment where ideas are free and you can learn from your peers and spread your wings. Groups like this provide a feeling of belonging, fellowship and the reassurance that you are not alone. With the world fast becoming totally dependent on technology, students in engineering, science and technology are becoming the gate keepers of civilization. The luxuries we enjoy are impossible without technology and those who understand it, maintain it and imagine to ways to use it. These people are fast becoming society’s most valuable citizens. The modern engineer needs to have a voice in the public discourse. The issues at the forefront of political debate are entangled in years of scientific research and require technical expertise to solve. If we never let our engineers live, how can we expect them to lead? Professionals, by definition are guardians of a body of knowledge.

Professionals hold high knowledge, and we look to them for advice, for they know more than the unprofessional. Priests were the first professionals, made so by their vows and sacred knowledge. As engineers, we are tasked with maintaining our civilization, as priests are tasked with maintaining the soul. It takes people with specialized knowledge to do the things we do. We are tasked with doing what the previous generation thought... Continued on Page 9

Heard a prof or fellow student say something hilarious or embarrassing? Send it to essb-com@engr.uvic.ca

“My internet was out. I probably would have done quite of few things for entertainment.” - Engr Female

“Its always nice to end with a hairdryer.” - Rustom Bhiladvala, Mech 345

“Its a Trap” - Admiral Akbar
UVic EcoCar

In 2007, the production of vehicles was at an all time high with more than 73 million vehicles made worldwide. Since then, there has been a steady decline in production rates after a global recession which was greatly impacted by the rising price of fuel. As we all know, oil is a limited resource and isn’t going to just miraculously fall out of the sky like water; one day, extraction will come to an end. Then what happens? Even if we can manage to pump fuel for another hundred years, there’s still the pollution factor. It’s not a green source of energy in which today’s society is trying to achieve. With another hundred years of burning fossil fuels, we will be severely hurting our ecosystems, killing trees, plants, wildlife, and even endangering our own health. In other words, there must be an alternative because I don’t believe society could function without the use of vehicles. As engineers, it’s our duty to find a solution.

At UVic EcoCAR, this is exactly what’s trying to be accomplished. For those of you who don’t know what EcoCAR is, it’s a three year, 16 team, collegiate competition established by General Motors (GM) and the United States Department of Energy (DOE) which runs across North America. The main purpose is for each team to convert a 2009 Hybrid SUV, donated from GM, into a greener and more fuel efficient vehicle. The UVic team has already innovatively designed a Plug-in Hybrid Electric Vehicle combustion engine and uses an advanced 2-mode hybrid transmission. The idea was to allow the car to run solely on its immense battery pack until the power was depleted when, at this moment, the vehicle would then run on a much cleaner, ethanol based (E85) fuel. Now in the third year of competition, the team will soon be ready to demonstrate what they’ve put their heart and soul into for the past two and a half years at competition this June.

Now you might be reading this and will be on one of two sides of the fence, either you’re the next Einstein of green technology and vehicles and will solve all world problems one day, or you’re just like every other engineering student, that is, looking for guidance from the engineering gods. I’m guessing it’s the latter and the answer is EcoCAR. The team is always welcoming new faces and would love to hear of any new ideas. As the team is entirely student based, there is a lot of practical work to be done with a chance to learn programs like DSpace, MatLAB/Simulink, Unigraphics, and others. If you’re still unsure, check out the team website, www.ecocar.uvic.ca, and keep updated through Facebook and Twitter. Also, the UVic team team is in the works to be a part of EcoCAR 2 which will feature a sedan rather than an SUV! This is your chance to get involved.

- M. Leung

![xkcd.com](https://xkcd.com)
Student Retention in Engineering

In my first week of engineering I gained insight into three things. The first was that, undoubtedly, frosh was the most epic event happening on campus that week. The second was that I was going to have to do a shit-load more work than the rest of my friends in Res if I wanted to pass my courses. And lastly, it was ingrained into my head that 60% of my engineering classmates would either drop out or switch majors by the end of first year.

Looking back, I am unsure whether or not this 60% myth is even in the ballpark of the actual engineering dropout rate. But one thing is for sure: the dropout rate is high. So high in fact, that the faculty has modified the first year course schedule and implemented a 12 month integrated first year option and is working on implementing things like mentoring programs, all of which aim to make first year easier and boost student retention.

It is my view however, that the lack of student retention in engineering is not a problem; it’s what sets us apart as a faculty. Each one of us sat through 12 years of high school, and thanks to the ‘no student left behind’ attitude, each one of us found out that a high school diploma means nothing in the real world. Lowering the bar for first year doesn’t produce better engineers, it produces more engineers. It produces engineers who, on average, will not be able to deliver the same level of quality and professionalism. When I complete my degree, I want to walk into the workplace as a respected professional, not as one of many pencil pushers with a watered-down piece of paper.

So as the faculty pushes to increase student retention, I challenge them to look for innovative ways to build stronger first year engineering students instead of building a more lenient first year. The dropout rate is not a result of the faculty failing to meet the needs of the students, it’s simply a reminder that engineering is not for everyone. For those of you who are about to successfully complete first year, congratulations and welcome to the team.

- S. Sermo

What Really Grinds My Gears

What really grinds my gears are people who don’t know the rules and etiquette of driving on a highway. The lack of knowledge and care I encounter on the roads is often unsafe and consistently appalling. Highway driving requires focus and constant awareness, whether the miles have been flying by for hours, or it’s just another drive home from a hard day of engineering.

I live in Sidney so I drive on the pat bay everyday and have about a billion examples to back up my case, but I’ll stick with the most concise. In this case, I am in the passenger seat of my car, and a certain ageless, genderless, relative of mine is driving along in the left lane, and the right lane is empty beside us. We’re going about 95 in an 80 zone, and it’s mid-day so traffic is light. After a little while, a car pulls up behind us, so both of us are in the left lane. “You should move into the right lane,” I calmly remark. The driver then uttered a verse that to this day sends shivers up my spine: “It’s okay, I am speeding”...

RULE #1 : The left lane is a passing lane is not a “fast lane”, it is a passing lane. If you’re not actively passing the travelers, get the hell out of the way, and back into the right lane.

RULE #2 : If you are in the left lane, and someone wants to pass you, that is, if there is anyone behind you, regardless of if you are going 80 or 180, you need to left them by. And the guy behind you shouldn’t have to tailgate you to get you out of the way. Even if the car pursuing you is a safe 4 seconds back, you still need to GTFO.

The right lane is an all-access pass to drive however fast you want, and these two rules can be complicated by merge lanes, drivers turning left, rush hour and road conditions, but that’s pretty much all there is to highway driving. Keep them at heart and I won’t run you off the road.

Respectfully, N. Syrotuck
**CANEU-COOP: Why You Weren’t Going to Apply and Why You Must**

I was still on co-op when I got a call telling me I’d be heading to Europe for 4-months to build exhaust systems for performance bikes. There is a single reason why I’m now writing from my tiny apartment in Koeflach Austria and that reason is CANEU.

I’d reckon that 100% of you don’t have a clue what CANEU-COOP is, and to be honest I don’t really either. I was, after all, hired by chance by a company who was affiliated with the program. I understand that it’s a partnership between UVic, Waterloo, and 3 schools in Germany and Austria. It involves 4-months of book-learning with a European ‘twin’ in Canada and then 4-months of getting your intern on in Europe for the same company as said European. This is as much as you need to know for now.

Why weren’t you going to apply? Because the application is due in the middle of the summer term – when you’ll be on co-op. You’ll be reveling in the new found wealth of gainful employment and won’t even be thinking about your next job. Perhaps you’d also be thinking that a CANEU-COOP job doesn’t pay well enough to be worth it?

Applying for a job takes about an hour. Taking this time aside to shoot off an application, whether or not you’re looking for a job, isn’t much of a commitment. Consider how glad you’ll be not having to apply for jobs during the school semester. And the pay? Beer costs CDN$1.75/litre here so you don’t need much money to live. If you’re really in trouble, head to Eastern Europe to get CDN$0.75 pints.

I cannot possibly put into words how glad I am to have applied to the CANEU-COOP project on a whim during my last co-op. Because I took one hour to apply, I’ve hit 7 countries in 7 weeks, have started to learn a new language and have locked down the best job I’ve ever had.

So before you ignore the message from UVic Co-op and Career about CANEU-COOP postings, consider how worth it the application would be. I can tell you (and will if you message me: butters@uvic.ca) that no experience in my entire life has been as good as these short weeks. Do yourself a favour and apply to CANEU-COOP come June – it will quite literally change your life!

- Liam Butters

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**UVSS Elections (Continued)**

...well-intentioned and passionate, represent the most extreme faction of student politics (at the very far left). Fuse is the next generation of the slate backed by the Canadian Federation of Students, known in its various incarnations as Putting Students First, TeamFAST and Students United. The students running under this slate have been responsible for the censorship I described earlier and would continue; they seek to ban sororities and fraternities as well.

As a friend of mine who supports Renew (the other major slate and a good option when compared to Fuse) pointed out to me, “the UVSS is the only student society at a major university which doesn’t have representation by faculty on its board of directors.

Currently humanities and social sciences students take most of the seats and the voices of science, engineering, business and law students often aren’t heard.” Renew plans to reform the board to make it more representative of all students, which I think will result in less censorship. I can’t be sure, but I’m guessing the ESS wouldn’t vote to take away its members’ ability to organize parties, perform stunts and raise money for causes... Uh oh. It sounds like the ESS itself could be classified as a fraternity/sorority!

Anyway, I encourage you to vote. Do more research if you can, and vote for whoever you like. It would be nice to see engineering students have more say in the way the UVSS gets run.

- E. Kyfiuk
Every year the beginning of March signals the final stretch of the NHL regular season, but it also brings about one of the most anticipated days on the NHL schedule: The Trade Deadline. For most it’s just another day; but for others it’s like a second Christmas in March.

In the last couple of weeks there have already been some major trades. The Leafs finally traded Kaberle and Pittsburgh, once again, filled their vacant roll of a scoring winger with young power forward James Neal from Dallas. Though deadline day always brings about more trades, arguably the biggest pre-deadline trade this year saw two terrible teams trade good young talent. Colorado sent a young talented forward in Chris Stewart and potential Calder candidate in Kevin Shattenkirk for former #1 overall pick Eric Johnson. With Johnson not progressing as he should have in St. Louis, this could end up being one of the most lopsided trades in leagues history, if Johnson tears his ACL golfing again. With that in mind, let’s take a look back at a couple of the most lopsided deadline deals.

March 7, 1988: The Flames sent rookie Brett Hull and Steve Bozak to the Blues for (former #1) Rob Ramage and Rick Wamsley. Though Ramage and Wamsley ended up winning Stanley Cups with the Flames their careers were both in decline, contrast to Hull, who went on to have 3 consecutive 70+ goal seasons and eventually won cups with both Dallas and Detroit and finished his career 3rd all time in goals.

March 20, 1996: The Vancouver Canucks traded Alek Stojanov to Pittsburgh for Markus Naslund. Naslund was having a breakout season with over 50 points in only 66 games, and Stojanov had only 1 assist in 58 games. And no, Stojanov was not a defenseman, he was supposed to be a power forward. Stojanov only played 60 more games in his career and recorded only 6 more points, and I’m sure everyone knows how well Naslund did.

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June 6, 1986: The Canucks sent young power forward Cam Neely to Boston for Gary Pederson. Pederson only had a couple more successful seasons, whereas Neely became an elite scorer in Boston, capping his career with a 50 goal in 44 game performance.
This Crossword is More Fun Than Listening In Class

Across
1. It operates your system
2. Electrical component that stores energy
3. Pointy pub pastime
4. Week of awesomeness
5. An unusable or unwanted substance
6. Where wolfram Alfa lives
7. Not a Cathode
8. Charity of this semester
9. Not quite Skynet yet
10. Stanley cup Victors to be
11. Limit as engr. gpa approaches zero
12. Where to get academic advising
13. George the construction lead
14. Dynamic in air
15. A B C
16. Do you have a date for the EEE?
17. You don’t make friends with these on
18. Periodic Table 77
19. Carnot, Sterling, Wankel
20. Animals that generates electricity
21. What is one in binary
22. Nitrogen Tetroxide
23. Thermal energy above room temperature

Down
1. The Hero of Math 201
2. A boring place to store information
3. Your profs do this
4. It takes more than one to make a whole
5. If you can dodge this, you can dodge a ball
6. Who through Coventry did ride
7. Electrical component
8. 4 Bar Mechanism spelt without an ‘h’
9. Professor Plum in the Library with the...
10. Main Component of Steel
11. Your hairy best friend that could rip your arm off
12. Good in Tension, Useless in Compression
13. Eta backwards
14. ESS Soccer Team
15. Opposed to
16. Bright and 80s
17. Measures Pressure

15   A B C
•   0 0 0
•   0 1 1
•   1 0 1
•   1 1 1
Engineering Extrapolations of the Future

**The Theorist (Jan 4 – Feb 18)**
*Famous Person: Issac Newton*

The only reason you chose engineering over a physics degree is so you can get a job after graduation. You are smart, resourceful and most of the time, arrogant. Mythbusters is your best friend.

Your ENGRScope: Procrastination is your friend this week, and your enemy the next.

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**The Analyst (Jul 4-Aug 18)**
*Famous Person: Grace Hopper*

A fan of pure academia, you prefer learning about something rather than actually doing it. Research, and rattling off stats sheets are both up your ally. You are secretive, curious and obsessive.

Your ENGRScope: Be wary of those who mutter the word ‘basically’.

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**The CAD Monkey (Feb 19 – Apr 2)**
*Famous Person: John Walker (cofounder of Autodesk)*

Drawing pictures is fun, and it beats getting a real job. And hey, in an engineering field, creativity isn’t even a requirement. You are honest, enthusiastic, and have an obsession with scruffy facial hair.

Your ENGRScope: Need to perform well this week? Increase your resistance to reach a higher potential.

---

**The Project Manager (Oct 4 – Nov 18)**
*Famous Person: Winston Churchill*

Nobody is quite sure what you do at work, or if it requires any engineering intellect, but one thing is for sure: you still tell them what to do. You are bold, cunning, and the king of fantasy football.

Your ENGRScope: You are awesome, and employers will recognize this. A co-op job awaits. This engrscope is in no way bias to the writer.

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**The Automator (Aug 19 – Oct 3)**
*Famous Person: Bill S. Nye*

Your sole goal in life is construct gadgets to tackle the petty chores in your life. You think studying English is pointless. You see yourself as a practical engineer, and would never propose a solution that is theoretically possible but practically unfeasible. As long as you exist, so does the potential for Skynet.

Your ENGRScope: You will a someone this week who will play no important role in your life.

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**The Retro-Techno Wizard (Nov 19- Jan 3)**
*Famous Person: Dilbert*

You can be found doing lengthy hand calculations late at night rather than adopting Matlab. Calculas is your best friend. You are eccentric, possessive and stubborn. Although your math skills are well honed, your social life could be greatly improved with the discovery of Wolfram Alpha.

Your ENGRScope: Your midterms will go poorly this week.
Welcome back from reading week. For those of whom spent the last week reading I applaud you. For those of you whom spent the last week skiing, and are working on Tubes and Wires late at night and still have two unstarted assignments due first thing in the morning, I’m sorry but you are royally screwed. You’re welcome Nigel, the EEE better be worth it. Signing off,

- Brandon Nikolaisen

Super Sudoku

Brain Buster

Create a sentence such that when “which” is replaced by “that” and the commas are inserted in the appropriate places, the sentence has a different meaning.

Send answers to essb-com@engwr.uvic.ca. Correct or creative solutions may be published in the next edition of Tubes and Wires.

Answer to Last Issue’s Puzzle:
(How the 4 people could cross the bridge with only 17 minutes of light left. The people took 1, 2, 5 or 10 minutes to cross).

Remove the batteries and wire the flashlight with only one battery. This will result in a low power light beam that will last the same length of time. When the first battery dies then replace it with the second. This should give you twice as long to cross the bridge and the quick walker can escort each person ensuring their safety. This would require some wire but in theory you could break the case apart and steal some metal from within it if you don’t have anything conductive on hand.

The two fastest people cross first as they probably reached the bridge first anyways. The fastest person goes back for the person who crosses in 5 minutes, as he will be able to make it for sure. The fastest person then goes back for the slowest person and they start crossing. The battery starts to die and the fastest person books it to the other side, leaving the slow person to his ultimate demise. The group is now much faster and consumes less energy. Natural Selection For The Win!

- Cam Smith

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Ryan Petty

Editor’s Quip

Welcome back from reading week. For those of whom spent the last week reading I applaud you. For those of you whom spent the last week skiing, and are working on Tubes and Wires late at night and still have two unstarted assignments due first thing in the morning, I’m sorry but you are royally screwed. You’re welcome Nigel, the EEE better be worth it. Signing off,