



THE CARLETON STUDENT ENGINEERING NEWSPAPER

THE IRON TIMES

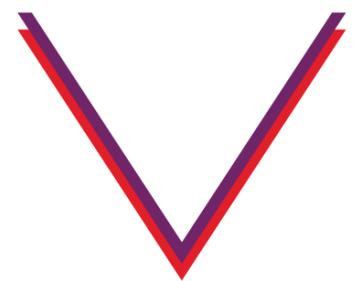
THE LAST IRON TIMES

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APRIL 2018



READ ON,
I DARE YOU



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AND MUCH MORE!



Gabriel Wong
- MECH V -

If you told me in first year that I'd actually make it to the end of engineering, I would've thought you were crazy. If you told me in first year that I would one day receive my Iron Ring, I would've thought you were crazy. But here I am, slaving away in Project Lab, vigorously tapping my Iron Ring on the table and annoying my project mates (it's a lot of fun), and reading my CCDP students' work.

To be completely honest, I'm

no superhuman with super brainiac powers. In fact, to be quite honest, I'm a C+ student (formerly C student). Yet by some miracle, I'm graduating.

So, what's the big secret? Answer, passion and perseverance.

I want you to ask yourself: why did you go into engineering? Passion for innovation? Making the world a better place? Being an inventor and getting to do cool stuff?

If being an engineer is something you actually want to do with your life, then it is something you will be able to achieve if you but persist. Because if you have a big enough drive then it will motivate you to keep going until you finish your degree.

Again, brains didn't get me to the end of my degree, perseverance did. I have been told by many people that they were surprised I made it to my final year. Some dude told me in first year that I was stupid and that I'd never graduate from

engineering. Joke's on him: he dropped out. ;)

And so I tell you today, first year or fourth year, that if you have a drive, a passion for something (like engineering), then it is something that you should persist to achieve. Yes, it will be tough. Yes, there will be failures. But your failures do not define your intelligence, or who you are. Failures are opportunities to learn the material better so you can ace it the next time you try.

If you have the passion for engineering, then that is often enough to push you to the end. Do not let you brain's self-doubt and fear of failure override your ability to think and persevere. Do not let that fear override your ability to be the change you want to be in the world.

And if you don't fail, heh-heh! All the better!

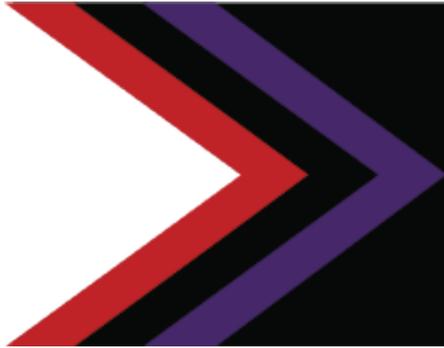
The point is, keep going, and don't give up.



WARNING:

This publication may contain offensive material. It should not be read by anyone who is easily offended. All opinions expressed within are solely those of the contributors; they do not reflect the views of the Carleton Student Engineering Society. This paper is purely satirical in nature and is not intended to be malicious in any matter.

If you wish to express your views on the content within, please email us at irontimes@ces.carleton.ca.



EDITORIALS

THE FANFICTION PICS CAN STILL BE FOUND ONLINE, FOR YOUR VIEWING PLEASURE

From the Desk of the ^{& Musical} Editor



Gabriel Karam
- CIVE II -

The Year-End in Review (Kind Of)

With this semester coming to an end (did time speed up, or what?), it's time for a quick look at everything that's happened. Notwithstanding all the events that took place in the earlier portion of the year, several pages' worth of stuff happened in the last month alone. Reflections, the C-Eng Musical, and NEW week were the main ones, but there were also several AGMs and VAP (and some interesting fanfiction readings that took place at said VAP). While I was not personally there to listen to "There is a Bitcoin up my butt and he is handsome," I heard it was a one-of-a-kind piece of art.

For me personally, this year has been one heck of a ride- if you are not very involved in C-Eng at the moment, I highly recom-

mend becoming so in the future. While, yes, we're primarily at school to get that shiny ring and a piece of paper, it is so much more rewarding to be invested in the place where you spend most of your waking hours. While it's definitely not a great idea to start skipping classes and spend all day in Leo's- for example -a visit for a quick bite to eat and some conversation between classes is a nice way to relax during the day.

Another good way to get involved and get to know people is to take a directorship. It could be something small, like mailing director, or maybe you'd like something a little larger. In which case, why not be the next Editor-in-Chief of the Iron

Times? Hey, what a great idea, right?

If you've got a good grasp of the English language (or decent, really), enjoy writing, and don't mind a little photoshop sprin-

kled here and there, this could be the job for you. It's a lot of work- I'm not going to say it isn't -but it's quite rewarding to see the issue come out each month, something you worked hard to make possible. If you're interested, apply during spring/summer hiring! There are tons of positions open, and one of them is probably perfect for you!

It's a little embarrassing to see that my little "review" has turned into a shameless plug (or maybe that was my plan all along, mwahaha), but this brings us to the end of yet another year. Good luck on your exams, friends, and see you next year!



THE CHARLATAN: C-ENG DOES MICHAEL MIA?!?

While it's practically tradition for us engineering students to go and see the C-Eng Musical, this year the Charlatan showed up in all its arsty glory. Not only did they come and watch, they wrote up an article and plastered it on the very front page (you can still find this article on the Charlatan's website, if you are so inclined).

Now, I'm all for artsies spreading the C-Eng Musical around, but I'm not quite sure they got the point of it...

For one, the article starts off by describing our largely bastardized version of Mamma Mia as a family-friendly show. Unless your family name is Stumpf, the Musical really ain't something you parade around at the dinner table.

"So, honey, what's that play of yours about?"

"Well, mom/dad/younger sibling, it's really just an average day-in-the-life-of-an-engineer kind of thing... y'know, nothing special. Pretty boring. No need to come. At all."

Secondly, the article describes the audience as being far more entertaining than the actual musical onstage. Not only is this untrue, but it is quite insulting to the per-

formers who spent more than half a year working on their acting, singing and instrumental skills. There's really so much time and effort put into two nights of spectacle, and the Charlatan doesn't touch on any of that. That's why you need to do your research, kids!

And last but not least, there were

all those small errors that are caused by the writer being someone unfamiliar with the subject matter. I mean, they even spelled "Lahara" wrong! Unforgivable! It's not just any old rubber Italian hand, it's an important piece of C-Eng culture! Welp, better luck to them next year.

engineering, Michael Mia! tells a similarly wholesome and family-friendly story, however

-THE CHARLATAN

EDITORIALS

FOR SOME REASON, WANDERERS MAKE ME THINK OF THOSE OLD WESTERN FLICKS



Cassidy "Next" Lang
- AERO C III -



Thinking About the paradoxical beauty of starting over

I realized I might have to do something different with this article when I came downstairs one morning and saw that my favourite self-help podcast had entirely re-branded and re-issued two of its earliest episodes from years ago. It turned out that the host was no longer with the show, which came as quite a shock to me, given that that show had been almost his entire identity.

Without going into much detail on the specifics of his departure from the old podcast other than that it wasn't exactly intentional, the host has since started a new self-titled podcast (The Jordan Harbinger Show) which is dedicated to a lot of the same content that made the old podcast so popular... But without the "self-help" moniker attached.

My point in bringing this up is that, while this drastic and abrupt change is not something the host would have ever chosen for himself, the thrusting-off of the content limitations that come with the label "self-help" may prove to be the best thing for his listenership.

I mean, this is certainly what everyone hopes will happen when they choose to make a big change in their life, like moving cities or starting down a new career path, anyway. There is a dangerous sort of beauty to the concept of just like Holly Golightly-ing it: severing all ties and moving somewhere else to reinvent yourself whenever you feel like changing it up. That's the ultimate escapist fantasy.

Take moving to university, for example (and if you didn't move cities for university, this isn't for you, sorry.) Maybe you needed a change of scenery, maybe you deemed the program was worth the

risk... Whatever the reason, here you are in Ottawa and it's never been easier to essentially reinvent yourself as a person.

And why not? At this point in your life, it's relatively low-risk. It's also refreshing to think that you can be literally whoever you want to be, as there's not a single person who has enough prior knowledge of who you are to call bullshit. You become the name you put on that Frosh shirt.

So, escapism is beautiful until you fast-forward two or three years on and you start to see cracks in the front that you begin to realize that no amount of reinvention can eliminate certain elements of who you are as a person. Even if you're not actively running from yourself, escapist tendencies are rather like anything else borne from our increasingly instantly-gratuitous society—fulfilling in the short-term but cripplingly unfulfilling over time.

The negativity of the last paragraph notwithstanding, I genuinely believe that people can change. But I also believe that it takes more than a change of scenery. I've always kinda liked the old adage "wherever you go, there you are" for its astute simplicity in conveying that sustainable change is a mindset more than it is a physical translation.

When I came to university in September of 2015, I changed a lot from high school. Most of it was sustainable change that I can con-

fidently say is not a front such as my shift from introversion to ambiversion.

But some of the changes were more "borrowed": attributes that I was trying on because I really wanted to integrate them into my personality. One such example is nonchalance and—spoiler alert—it didn't work. I can't not care about literally everything (to my benefit or detriment) no matter how hard I try. And sometimes that's just life.

I'm not done trying to make my escapist tendencies work to my advantage. There's something so compelling about saying sayonara to all of the preconceived notions—positive or negative—and starting yourself all over again in a new city, or country, or continent.

But you have to be ready for change. If you're not truly committed to starting over, to making lasting lifestyle changes, life has an odd way of gravitating back to what it knows. Feeling uncomfortable or restless where you are due to the people around you, is a lie that your escapist tendencies like to whisper in your ear to convince you that you don't need to change yourself, you just need to change your environment.

While this will likely benefit you in the immediate future, the novelty will eventually fade. You might even find yourself right back in the same mental place that you tried to run from not so long ago. I don't think it's abnormal to crave novelty (at least, I hope it's not) but it's

certainly trying to compensate for something.

I found a neat set of "emotional equations" while scrolling on Pinterest (hold the judgement) and while I don't necessarily agree with them, they're an interesting concept to pick apart. The equation for workaholism in particular, sticks out to me in the context of this article, as it features the question "what are you running from?"

Getting past the initial annoyance that the creator of these equations doesn't seem to understand how math works—given that you can't exactly quantify this kind of question for use in an equation—the creator has chosen to balance this question with an equally difficult one: "what are you living for?"

And honestly, if you can solve this equation, I think you've found the meaning of life. Philosophers of yore will have nothing on you. Forget workaholism, I think you're scaling Maslow's hierarchy of needs to solve for the very pinnacle of self-actualization.

But seriously, I'm putting these emotional equations here for your interpretation. Pick 'em apart. Chew on 'em. See if you can't create your own with your vastly superior handle on mathematics. After all, they say engineers like to solve equations... right?

Emotional Equations

Emotions = Life By Chip Conley

Despair = Suffering - Meaning
Disappointment = Expectations - Reality
Regret = Disappointment + Responsibility
Jealousy = $\frac{\text{Mistrust}}{\text{Self-Esteem}}$ Envy = $\frac{(\text{Pride} + \text{Vanity})}{\text{Kindness}}$
Anxiety = Uncertainty x Powerlessness
Calling = Pleasure / Pain
Workaholism = $\frac{\text{What Are You Running From?}}{\text{What Are You Living For?}}$
Flow = $\frac{\text{Skill}}{\text{Challenge}}$
Curiosity = Wonder + Awe
Authenticity = Self-Awareness x Courage
Narcissism = (Self-Esteem) ² x Entitlement
Integrity = Authenticity x Invisibility x Reliability
Happiness = $\frac{\text{Wanting What You Have}}{\text{Having What You Want}}$
Joy = Love - Fear
Thriving = $\frac{\text{Frequency of Positive}}{\text{Frequency of Negative}}$
Faith = $\frac{\text{Belief}}{\text{Intellect}}$
Wisdom = $\sqrt{\text{Experience}}$

COLUMNS

Y'ALL WAITED A WHOLE YEAR FOR THIS ONE



Wow, it's the end of second year already! It feels like just yesterday that I wrote last year's article, First Year Adventures. A lot has changed from first year though; for starters, if first year is like a walk in the park, second year is more of an uphill sprint while being chased by a mildly angry dog (but a small one, like a beagle or pug or something like that). As tough as it is, the good thing is that my lanyard-around-the-neck-and-flip-flops-in-the-middle-of-winter-days are over (sucks to suck, first years). Although I'm no longer prancing around in a Harambe suit and waking up on my facil's floor with dicks drawn all over my face, it's still been a weird ass, crazy year. So here it is- from me and some other fellow peers -we present to you our sloppy and downright crazy second year adventures.

NO MATTER THE YEAR, FSK 1 IS ALWAYS A MESS

You don't have to be first year to have a sloppy night at FSK 1. This particular person and friends decided to party hop, and when leaving, she somehow ended up with a full cake (at 11pm on Preston street). Once they got to the next party (after inhaling the entire cake in the Uber), her completely-wasted self decided that it would be a good idea to help out a drunk friend. After taking the friend home, somehow, somewhere in the friend's house, this particular person pissed her flightsuit, and only realized while heading back in the Uber. Until now, this friend had no idea this leakage happened in their house. You know who you are, and I'm sorry.

THE LAHARA LOVER

This is story of someone who has deepthroated Lahara and lived to tell the tale. We don't know if he was so far gone from booze that Lahara resembled a hotdog (as this was at a party called Sausage Fest), but the deed was done. Despite the fact that Lahara has been through the

dishwasher (we now have a new dishwasher), the ghost of the clap and other various diseases run deep through her rubbery flesh. For the rest of his life, he (and his future girlfriend) will have to live with the fact that the same object that has possibly been up various asses has also been in his mouth.

SHITSHOW

This poor, poor boy. He wasn't even drunk, he was just going to an event and didn't want to be late. The issue is- it doesn't matter if you're on an OC Transpo bus or anywhere else, if you gotta go, you gotta go. He felt the fury of a thousand shits in his bowels, hopped off the bus into some field, tried to run to a Dairy Queen in the hopes of getting to a bathroom in time, only to find out it was closed. It was around 9:55am, and the store opened at 10:00am. He then tried to sprint behind the dumpsters to pop a squat, but unfortunately the unfortunate happened. Let's just say that this was a crappy situation for him.

10/10 WOULD BANG

After a night of drinking, most peo-

ple wake up by themselves, sometimes they wake up next to someone else, but very rarely do they wake up in nothing but their boxers on top of the C-Eng travel gong. Might I say that alcohol and the paranoia of losing the gong (especially after not having it for a year) aren't a good mix.

MY WAY OR THE HIGHWAY

This guy is like a drunken version of Houdini, except it's more of an accidental disappearing act. Him and his friends got kicked out of a party, so they naturally made their way down to Tequila Jacks. While waiting in line to get in, the friends turned around and he was just gone. Awakening from his blackout, he remembers handing a cop his ID.....while standing on the side of the highway. He finally ended up at a Lone Star and got safely home from there. Might I just add, guys are dumbasses (which is why I date women).

TRICK DRINK

Ah yes, the most confusing party of the year: Chick Drink. Every-

one looks absolutely fabulous! The only issue being that a lesbian like myself gets a little confused as the night goes on. Mistakes were made, 10/10 do not recommend accidentally kissing your male identifying roommate. I can never look at him the same after that.....(but yolo, you can experiment in uni, I guess).

A GENERAL LAST NOTE

Second year is a lot different than first year. You just feel more comfortable, as there isn't that big jump from highschool to university. At the same time, things ramp up real fast, and it can be easy to get discouraged. This was the year that I first experienced burnout, and boy does it ever suck! If you easily get stressed from school like myself, remember that it's okay to take time for yourself. Whether that be Netflix, chilling in Leo's, skating, swimming, or even just being a general doofus with your friends, sometimes your best work comes after letting loose. I have learnt a lot this year and there's definitely more to come. Until next year!!!



COLUMNS

TOO BAD IT'S THE ENDING THIS TIME...



(-ENG SPEAKS:

Endings and Beginnings

“What's something you really want to accomplish before getting your Iron Ring?”

Getting to Fourth Year.

Alex Stevens
CIVE II



Argentina Gomes
MECH III

To not fail a single class.
Shit, did I just jinx it?

Gaining a singular
job offer.

Owen MacIntosh
BMED MECH III



Denise Mayo
COMP SYS II



Flightsuit! I really
want a flightsuit before
I graduate.

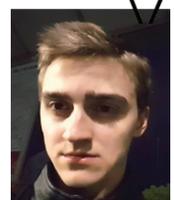
Get flightsuit & call-
sign, go to IREC



Udaypaul Dhaliwal
AERO D II

Look out of a window on
one of the top floors of
dunton

Bobbbabbib Bebobob
ELEC II



1. Win the Leo's bum award, 2. Get
card games back into Leo's, 3. Get
SCESoc an Office.

Logan MacGillivray
SOFT III



LOL, lets hope I get through
first year. One step at a time
bois.

Anto Dency
AERO I



Ariq Maclean
COMP SCI III



Wait there's a ring at
the end of compsci?

Not be single.

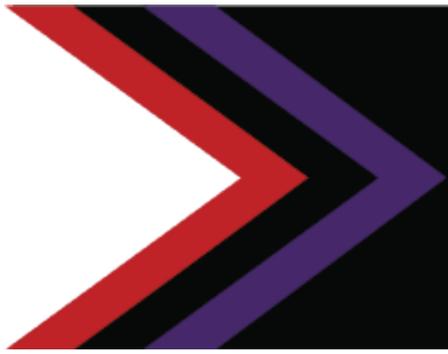


Rian Macneal
AERO C ??

Denise Mayo
COMP SYS II



Flightsuit! I really
want a flightsuit before
I graduate.



COLUMNS

DON'T WE ALL WANT GLENN MCRAE TO BE PROUD OF US

I want to be able to look myself in the mirror and say "Glenn McRae would be proud."



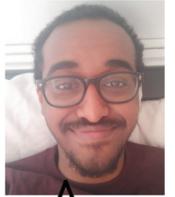
Caroline Lenarcic
AERO C II

Make a decent game. It's always been a dream of mine.



Jamie Hopkins
IMD II

Moe Qalinle
ENG PHYS I



1. President of a functioning CEPS. 2. Ask a particular person out. 3. Be able to sleep more than 3 hours a day.

"What was your favourite memory/moment throughout the whole year?"

Getting that SuperFrosh cape and having the best week with the Borts!



Yes.

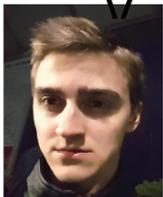


THE CENG MUSICAL
OBVI

NEW Week.



Not my favorite, but one of my more interesting moments was when I accidentally drifted from turning too fast. It was quite an interesting experience.



The first comedy night where we heckled the heck out of the comedians.

Surviving Dynamics I (with Sasi-adek!!!) ranks pretty high for me, just because it was so unexpected. This is why I chose Aero C... Every day we stray further from mechanical.



Going to a friend's house to hang out. It has been too long.



Trying out D&D for the first time and loving it, meeting new people in general.



Worked in a lab through the night with my fellow Eng Phys. Shortly after they all left that morning I was left alone to watch the sunrise; this is my new family I thought. <3

COLUMNS

GET INVOLVED SOONER!

“If you could redo your university life, what would you do differently?”



Actually getting involved day 1.

Pay more attention to McBae's lectures.



I would get involved from Day 1



Study harder for the Fluids 2 Midterm, fuck.

Attend more classes.



Win the scavenger hunts. With the knowledge of the correct answers, the whole thing would be simplified greatly, and at last I could feel whole.



I don't particularly regret any of my decisions since I started university. High school, however...



Invest in bitcoin and drop out immediately because who needs university when you have infinite money?

I'm all about understanding things could've gone better. But since things are in the past, best to acknowledge and move on. Life's meant to be lived present, not the past.

I would've gotten more involved in C-Eng sooner! It can be so intimidating to jump into activities, especially when you live far from campus. But I've still got two more years... plenty of time to get all up in ya faces >:)



I would focus on making and maintaining friendships more so throughout my first year and continue onward with that. I'd not take Dynamics, Solids, and Fluids all in one semester in my 2nd year. I'd try to be more involved with events and clubs I really like and with the C-eng community in general, however I'd also avoid over committing to too many extra curricular activities at once. Aside from that, I'd do everything else I've done since starting uni the same way, and take the bad with the good.



Spend more time in Leo's

“Are tacos sandwiches?”



YES	NO	HELP	OTHER
			"HENRY IS GARBAGE RAVIOLI"

CAN A LEO'S BUM EVEN SPEND MORE TIME IN LEO'S?

GALLERY

SO CLASSY!



GALLERY

BUT ALSO THE MOST TIMES MOFO HAS BEEN SHOUTED IN THE CHATEAU LAURIER



WHEN AUDIENCE PRESSURE IS TOO STRONG

REPORTS

ONE FIRST YEAR IS NOT LIKE THE OTHERS :3



This past February we had the awesome opportunity to attend the First Year's Integration Conference at Lakehead University, which provided first year engineering students from across Ontario with guidance in becoming active members of the engineering community. It was a total blast! 10/10 would recommend that you attend at least one engineering conference before you graduate. Here's the low-down on two sessions that we particularly liked.



Abby MacGillivray
- AERO I -

TEAMWORK MAKES THE DREAM WORK

In any group, teams need to understand how they can develop as a team and how this can get better results. They must be aware of their progression and make plans to get even better (the team equivalent of Stephen Covey's "Sharpening your Saw", which is habit #7 of highly effective people). The key theme for a team is constant improvement - striving for excellency and achieving goals is the epitome of teamwork.

One system of team development was created by George Charrier, in which there are five stages which teams pass through as they become more efficient: polite, why are we here, bid for power, constructive, and esprit.

LEVEL 1: POLITE

Level 1 is day 1, when you're getting acquainted, sharing values, and getting to feel out the group dynamic. Here, we can sometimes see cliques form, or stereotyping taking place. In this stage, any hidden agendas that team members may have stay hidden.

LEVEL 2: WHY ARE WE HERE

In Level 2, the group starts to define its goals and objectives. It usually sets a demanding agenda, which can put stress on if things aren't getting done. Some members start taking some risks, and it can

be sensed here if there are hidden agendas. Cliques grow, which segregates the team and sets up for Level 3.

LEVEL 3: BID FOR POWER

This level is the chaos: there's competition for attention, conflict arises, cliques assume power, hidden agendas change behaviour, feedback can be stinging, disclosure is cautious (lack of trust), and creative suggestions fall flat (negative space). Team members come armed to meetings so that that can assert themselves and not get stepped on. In these situations, there is usually help needed from outside the team. The use of a facilitator is common, and usually helps work through some of the issues teams are experiencing. Taking the initiative to have the real conversations and open up the discussion to the issues that exist (*raising the overall consciousness!) is key to working through conflicts.

LEVEL 4: CONSTRUCTIVE

Once the team breaks through the wall of 'bid for power', it allows for open minded discussion. Team spirit starts to build, cliques dissolve (*unity is achieved), leadership is shared, the group identity grows, and generally Level 4 is the rainbow after the storm. Conflict is there but is dealt with in a more constructive, positive manner. This newfound teamwork makes for effective use of resources, improvement from here is on the upswing.

LEVEL 5: ESPRIT

The fifth and final level is the ultimate team experience: unity, high spirit and high morale. Teams look forward to meetings, there is mutual acceptance, cohesiveness and loyalty. At this point, cliques are absent and losing any team members is devastating. These kinds of teams get shockingly good results!



Sophie Bee
- ENG PHYS I -

THE TIME TO RELAX IS WHEN YOU DON'T HAVE TIME TO RELAX

School is crazy stressful- and pursuing an engineering degree is extra. Recognizing signs of stress and addressing them is key to maintaining good mental health. First of all, it is important to recognize that not all stress is bad! Stress can motivate and provide healthy pressure; but it can also start to hinder performance and overall health past our own peak performance threshold.

So how to recognize signs of stress and address them? The Mental Health Continuum Model is a very useful tool that helps us identify which phase of mental health we might be in, and the actions we can take at each phase to get healthy.

IDENTIFY YO SELF

Are your sleep patterns normal? Is your mood pretty stable? Are you full of energy? Is your social game on point? Congratulations! You're in the Healthy Phase! Keep doing what you're doing: focus on the task at hand, break problems into manageable chunks, nurture your support system, and stick to a healthy lifestyle.

Do you have trouble sleeping? Are you more irritable than usual? Are you tired, procrastinating, and less-than-social? Hmm... looks like you're in the Reacting Phase. No worries: recognize that you've got limits (like everyone else), get some adequate rest, food and exercise, try out some healthy coping strategies (like going for a walk, hanging out with the therapy dog, meditating, etc.) and identify your stressor so you can minimize them. Also, check out this free tool from Carleton that helps you manage your emotional well-being without the help of a counselor:

<https://carleton.ca/wellness/tao/> You got this!

Is everything hopeless? Or maybe you're just always on edge/sad/angry? Are you restless in your sleep? Are you fatigued, and have aches and pains? Has your performance taken a nose-dive? Are you avoiding being social? Hey, my dude, you're probably in the Injured Phase. Now it's time to talk to someone. Anyone. You may feel like there's no one around, but I can guarantee there's someone there willing to listen and help you out. Seeking social support instead of withdrawing from it is 100% the key to getting healthy. Check out Leo's or your stream society office, where you'll likely find a fellow C-Eng student's ear to talk off/ shoulder to cry on #weareallinthis together. But if you'd rather speak anonymously, you can always call the Distress Centre (613-238-3311) - it's confidential and someone is ready to listen 24 hours a day, 7 days a week. You can do it!

Are you unable to sleep yet completely exhausted? Are you excessively anxious, easy to tick off, and depressed all at the same time? Is it just impossible to do any work? Are you skipping out on classes and social events? Like, all of them? Ok you might be in the Ill Phase. This one's no joke: seek consultation from a professional and follow their recommendations so that you can get back to being physically and mentally healthy. You'll feel much better much quicker with their help. On campus, you can talk to a counsellor or a physician in Health and Counselling Services (2600 CTTC), a case manager at Student Affairs (430 TB), or your departmental advisor. Check out this page for more info: <https://carleton.ca/studentaffairs/care-report/coping-with-crisis/> Hang in there!

And finally, to get better at identifying your own signs of stress (i.e. increase self-awareness), try practicing mindfulness! There are many free tools and methods out there, so find what works for you! My two personal faves are Yoga With Adrienne (she's on YouTube, she's awesome) and the Aware Meditation & Mindfulness App (for both Apple and Android). So much stress relief goodness!

Remember: even Superman had his Fortress of Solitude (aka meditation station). Recharge to take charge!

REPORTS

FROM SOMEONE WHO'S GONE THROUGH IT ALL

STORMWATER MANAGEMENT ON CAMPUS



Jessica "Screecher" Burden
- ENVE IV -

Hey kids, I'm your fourth-year rep for CSCE and here is the essence of my fourth-year project.

Have you ever been walking across campus, and suddenly your path was blocked by a puddle the size of a mobile home and as deep as the depths of your despair? Well, my group is trying to fix that! Sadly, we cannot fix the despair, just the puddles.

Alright, in general, stormwater management is done when an area is being developed, since it is known that when you replace natural ground cover with impervious surfaces such as buildings, roads, and parking lots, there is going to be a dramatic increase in stormwater runoff, since the water can no longer permeate the ground (Figure 1). This runoff can lead to flooding of the area or it can negatively impact the receiving water body through the increase volume and flow rate of water entering. As well, as water flows over these

impervious surfaces, it collects sediment and pollutants which can contaminate these water bodies. Effective stormwater management maintains the pre-development quantity of stormwater runoff and provides treatment to improve the quality.

The problem with Carleton's campus is that it was developed without implementing adequate stormwater management measures. Sure, there is a storm sewer network, but after modeling it in PCSWMM, we have found that it is insufficient to convey the stormwater from past storms, and therefore, as climate change increases the frequency and severity of storms, the storm sewer system will be no match for future conditions. As well, there is minimal quality treatment on campus, thus the Rideau River is being contaminated by the stormwater coming from campus.

We also sampled the stormwater from several rain events to test the quality and found that there are high levels of total suspended solids (TSS). This is an indication of poor overall water quality, since not only is TSS a problem on its own, it also provides a substrate to which other contaminants can bind. Therefore, in terms of quality, reduction of TSS loading is the greatest priority.

After completing a feasibility study, our team decided to try to implement grass swales, green roofs, pervious pavement, oil grit separators with filters, infiltration trenches, and bioretention facilities. Since this is obviously too much to explain in this article, I'll just talk about bioretention facilities, because they're my favourite. If you want to know more about any of the other stormwater management measures I just listed, feel free to message me or find me in CSCE.

Bioretention facilities, sometimes known as rain gardens, are considered Low Impact Development or Best Management Practices, since they use green infrastructure and work by encouraging natural processes, such as infiltration. The bioretention facility consists of a garden planted in engineered soil media over a perforated underdrain. It is connected to the storm sewer network in case of high volumes of water. Benefits of using this system include reducing peak runoff rates and volumes, and providing significant water treatment, thus improving both the quantity and quality of stormwater runoff.

There are actually 3 bioretention facilities along Sunnyside that I've done work on for my summer job, if you want to check them



Figure 2: Bioretention Facility

out! There's one at Roslyn, Leonard, and Grosvenor.

On campus, we're looking at putting some of these along Campus Avenue and in that open space between Canal, UC, and the Arch Building. The final design is still ongoing, so that's all I have to say, goodbye.

PS. Fourth-year project seems really daunting in lower years, and well... it's actually worse than you could ever imagine. No one in project knows what's going on ever and it's more stressful than the first three years combined. It is seemingly endless suffering. But I promise that you'll survive.

Just a little piece of advice though, don't overload in fourth year. Even if the pre-req tree tells you to. Don't listen to the tree, it's mean and wants you to suffer.



Figure 1: Increased Runoff from Urbanization

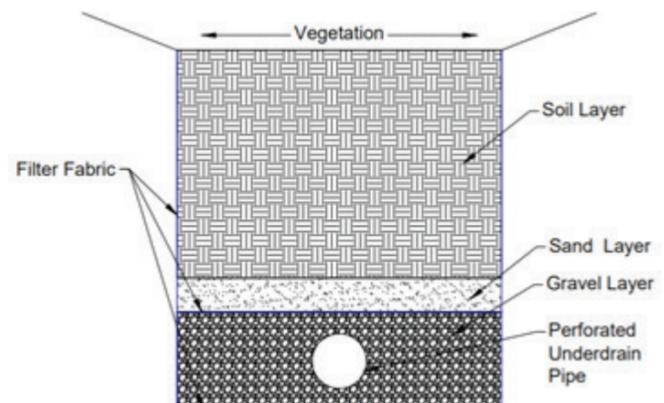


Figure 3: Cross Section of a Bioretention Facility

REPORTS

AND THE FORECAST CALLS FOR... MORE REPORTS!



THE CONFERENCE ON DIVERSITY IN ENGINEERING

Ryerson University 2018

"WHAT CAN YOU DO TO MAKE ENGINEERING MORE DIVERSE?"



Rebekah Scanga
- CIVE III -

Being a female in engineering, I am constantly reminded of how homogeneous the engineering population is; it hits me the most at the beginning of every semester, while most students are still attending class. It amazes me that out of a class of over 100 students, there might be 5 girls. The lack of females in engineering is a well-known fact. The acknowledgment of this has prompted numerous programs and incentives to increase the enrollment of females in Engineering, however, it's not just females that are a minority.

Individuals of colour and of heritage that is non-European are also lightly visible in our classes and among the engineering workforce. What is the answer?

The answer is to diversify. Yes, diversity "looks good" but it is also the right thing to do as far as human rights are concerned. As well, diversity in the workforce has been showing to improve problem solving. In a profession where the number one role of the engineer is to solve problems, having individuals from different backgrounds and experiences working together is the key to obtaining the most efficient and innovative solutions in a modern society.

Diversity is not just about having a mix of different people, it includes respecting and encouraging inclusivity. At the end of the day a solution is the priority. The gender, colour, religion, creed or orientation of an individual shall not impede the acceptance of an individual's proposed idea. Because discrimination has been around for a long time, change will not come overnight. It won't even happen in a year unless each of us starts by taking the first steps to embrace a diverse community.

Below are three small steps that each and everyone of us can take to support this necessary change:

1. SPEAK UP

If you see someone treating a fellow classmate or colleague inappropriately call them out on it. Frequently, gender biased comments are said in class by students and faculty alike. Professors addressing the whole class as gentlemen, disregarding the female students present is disrespectful. "The girls will like this. It's like baking," maintains an outdated stereotype. I urge each of us to respectfully speak up in the moment or after the class to the individual who made the comment and make them aware of how inappropriate the comment is even if they hold a position of authority. In many cases, comments like those above are said without thought or are meant to be funny. The fact is that they are not funny. These kinds of insensitive comments build up in a person's psyche. In time, the individual may start to convince themselves that in fact, they do not belong in engineering. It's not just sexist comments that need to end. Engineering like medicine and law is a profession. What individuals say at work and in

public represents themselves and the profession. At the end of the day engineering is no place for derogatory comments and bigotry in public or in private.

2. BE AWARE

Reader, I hate to break it to you, but the world does not revolve around YOU. As mentioned in the examples above, it's time to think about what you say and how it will affect those around you. At the conference, the following sensitive situation was raised: Members of the LGBTQ community constantly deal with individuals identifying and referring to them by the wrong gender. Yes, no one is perfect, and some habits die hard. But, let's say you have a friend or colleague that comes out as transgendered and you call them by the wrong pronoun. The worst thing you can do is make a big deal about. You have already made the individual feel uncomfortable. Don't make them feel like they need to make you feel better because you messed up. Say sorry and get on with it. Don't dwell on it as it makes the whole situation uncomfortable for both parties.

3. BE AN EXAMPLE

The path to diversity is going to be a decades-long journey. It's not as simple as companies or even universities saying they will accept more people from minorities; the problem is that many of the youth in these minorities don't have role models, the tools, the education or even the encouragement to apply to Engineering. Now, the question is, what can you do? If you find yourself to be a minority in Engineering, something as simple as visiting your old schools to talk to the students, or encouraging a younger family member or friend to pursue

Engineering can make a big difference. You can also help with youth outreach events run by Carleton University or the community. Even when you are on Co-op and especially once you are working, the need to model and encourage future Engineers continues. For an individual to see someone that they can relate to prosper, in a field like Engineering, might be all the encouragement they need to go for it.



CSCE APRIL UPDATE

CSCE hosted their first ever WGM this past march. The meeting allowed an overview of what the society has done for the year. A couple of highlights from the meeting were the presentation of an updated constitution and availability for a motion to amend it, as well approval of updated By-Laws for the society. A big thank you to everyone who attended! As the 2017-2018 term finishes, I would like to send out a huge thank you to all the members for making this such a great year. Good luck to all those running for positions on next term's council. We also wish the best for everyone during exam season and hope for a safe and happy summer!



CARLETON STUDENT ENGINEERING SOCIETY

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WHAT IS CSES?

THE CARLETON STUDENT ENGINEERING SOCIETY HAS BEEN SERVING THE STUDENTS OF CARLETON ENGINEERING FOR MORE THAN 35 YEARS.

ITS GOAL IS TO PROVIDE ITS MEMBERS WITH ACADEMIC, PROFESSIONAL, AND SOCIAL RESOURCES TO HELP THEM MAKE THE MOST OF THEIR FOUR (OR MORE) YEARS AT CARLETON. IF YOU'RE AN UNDERGRADUATE STUDENT ENROLLED IN A STREAM OF ENGINEERING, YOU'RE A MEMBER OF CSES.



President
Sasha Christie

Hey C-Eng! As my term comes to an end, I would like to express what an absolute pleasure it has been to serve as your president for this past year. I know it has been a roller-coaster of a term and I appreciate the continued support that I have received from the community. Before I take my leave I am making a push to implement our new Peer Mentor Program in collaboration with faculty, so keep your eyes open for updates! Thank you for an amazing year and best of luck on finals!



VP Internal
Tristan Durie

Hey Friends!! I would like to thank you all for the fantastic year, From FYC to AGM, working with everyone has been an amazing experience, I wouldn't trade for the world! I want to congratulate all the first years on the completing their first year. We are hoping to see you again in the Fall! To the Graduates, enjoy your Pewter Mugs, Iron Rings, and Degrees, they are more than well deserved, we hope you come back to visit!! And to everyone in between keep it up, it will all be worth it, can't wait to see you again soon! Good luck on exams! Have a great summer! Love you friends!



VP Academic
Caroline Deluce

Hi C-Eng!!! Look at that, another year gone by! A lot has happened in the past few months: C-EngC, OEC, workshops, and NEW, all thanks to all of my amazing chairs, directors, and volunteers. It has been a wonderful year, and my term as VP Academic is almost done. I honestly have to thank everyone who has attended my events/competitions, because you are the reason why I love doing this position. As I am heading on my way out, I would love to welcome next year's VP Academic, Ahmed Abdalla. Again, thanks for a wonderful year! P.S. Check mycses website for the exam library.



VP Publications
Cassidy Lang

Hey, C-Eng! The last month of the 2017-2018 school year (and my term as VP Publications) is finally upon us. That also means it's time for me to get started on the design for the new handbook agendas and update the passports for 2018-2019, so that's what I'm going to be up to this month. If you belong to an affiliated student group of CSES, I highly recommend you email me a very short summary of what your group does so that the information in the new handbooks is up-to-date! Thanks for an awesome year, C-Eng, and good luck on your finals. Catch ya on the flip side.



VP Finance
Justine Godin

Hey C-Eng! This semester has been crazy busy and I'm happy I could spend it as your VP Finance! The financial review is well underway with Welch LLP and most events and services have been paid for!! I hope you've all had a great year!!



VP Social
Julia Ferri

Hey C-Eng! As the final semester of the year, and ultimately the final month of my term, I regret to admit that I have no more CSES related events to invite you to. It's been a great run, from monthly Trivia nights, to bi-annual comedy nights, an exciting semi-formal, an absolutely beautiful end of year formal, and so much more. Thank you to everyone who came out and made these events as great as they were! I hope you will continue to stay involved next year as it is with great pleasure that I will transition my position onto Kaylin Paquette! I have no doubt she will bring some exciting events to the table for you! Enjoy your summer!



VP Services
Michael Lanning

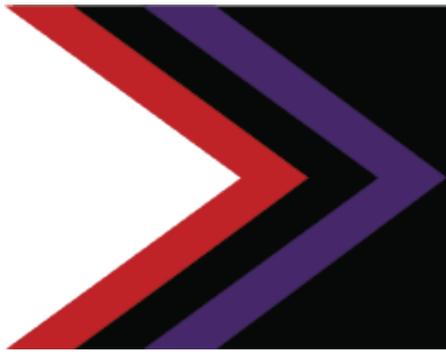
Hey C-Eng! This is the last you'll hear from me about services! Sweater orders were a success, and now on to spring apparel! 'Sums out Guns out' tanks, 'Go Hard, Go Purple, Godiva' tanks, Brewer tees, and the last of the trucker hats are still on sale, just in time for another blast of winter!



VP External
Johan Prent

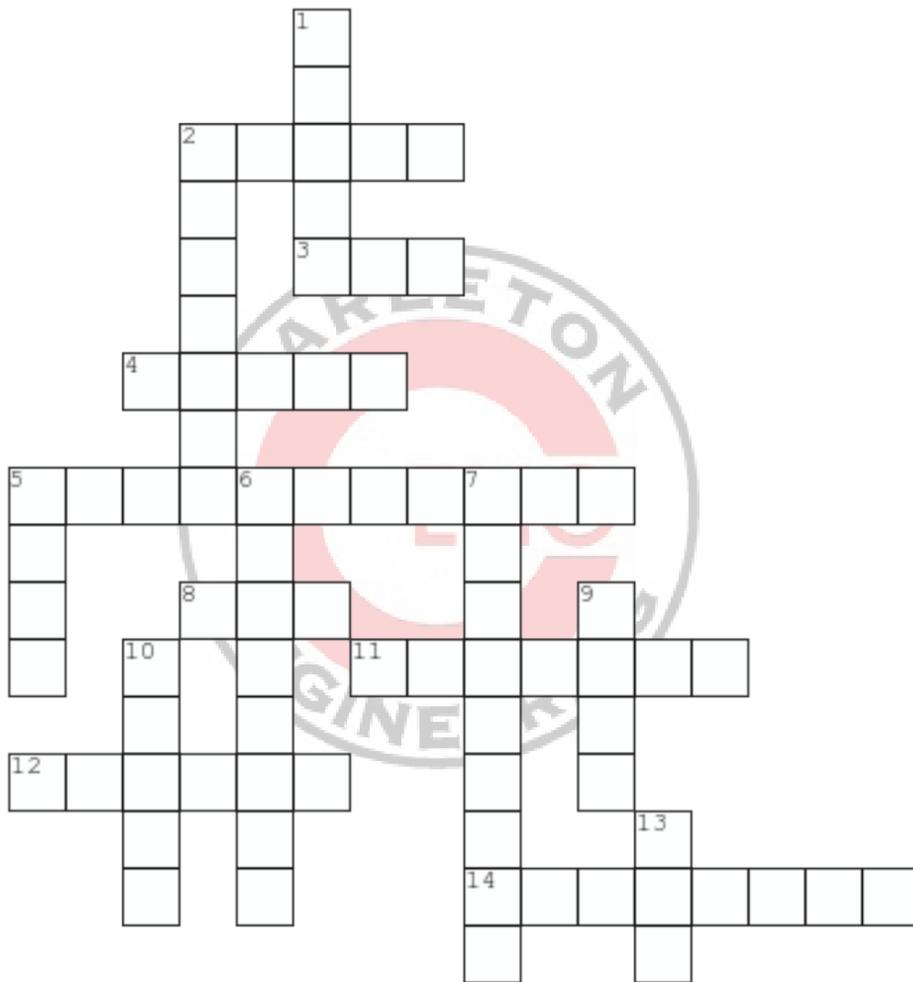
Hello! With the end of the academic year fast approaching, this means that I will be transitioning in the new VP External: Bay Ross! It's been a fun year, and great learning experience! I hope everyone had fun this year too! With ESSCO AGM happening in the summer, look out for the applications to attend! Until next time C-Eng! Johan out.

DON'T BE A STRANGER! ANYONE INVOLVED IN CSES WOULD BE HAPPY TO TALK TO YOU ABOUT ANYTHING FROM DIRECTORSHIPS AND EVENT PLANNING TO VOLUNTEERING AT LEO'S LOUNGE, OR JUST SHOWING UP TO EVENTS. IT ALL PLAYS AN IMPORTANT ROLE IN MAKING ENGINEERING YOUR FAMILY AWAY FROM HOME. REMEMBER... EVERYTHING COUNTS FOR FLIGHTSUIT STAMPS.



DISTRACTIONS

C-ENG DOES CROSSWORDS



Across

- 2. Ironically leaky; just blame the civils, right?
- 3. What's _____ with you?
- 4. 'I'll see you next year'
- 5. A bit pricy this year... but totally worth it!
- 8. It's only once a year, but you better be prepared for a long haul.
- 11. Two buildings sharing the same weird pronunciation.
- 12. Count the stairs!
- 14. Poll Everywhere, anyone?

Down

- 1. This person has an insatiable appetite for only one thing...
- 2. Did you come see it too?
- 5. All the lil' eng kids want this sparkly piece of jewelry.
- 6. Get hyped! Next year things will be truly out of this world.
- 7. Since when have these guys been on time?
- 9. Home is where the heart is.
- 10. Careful not to take a dunk in here, or your children might have extra arms.
- 13. Only three letters, but when someone says them on flightsuits, everyone runs.

EXAMOSCOPIES



ARIES

LET GO OF YOUR INNER HATRED FOR EXAMS WITH SOME YOGA IN THE PARK. OR YOU COULD TRY BECOMING ONE WITH THE FORCE AND TAKING OUT YOUR ANGER ON 12 IDENTICALLY NAMED INDIVIDUALS WHO HAVE BEEN PESTERING YOU ALL SEMESTER.



TAURUS

THERE ARE SOME DAYS WHERE IT'S BEST JUST TO STAY AT HOME IN YOUR COZY BED. TODAY IS ONE OF THEM (APPLIES TO EVERY DAY THIS IS READ).



GEMINI

EXAM STRESS IS COMING, BUT LUCKILY THERE ARE SOME QUICK CURES IF YOU'RE EVER IN A PINCH. MOST CAN BE FOUND AT YOUR LOCAL STORE, IN 375+mL QUANTITIES. DEFINITELY A BIG HELP.



CANCER

SOME SAGE ADVICE THIS MONTH, CANCER, IS TO TAKE ADVANTAGE OF THE PRECIOUS TIME LEFT. PLAN A NICE LUNCH OR DINNER WITH THE PEOPLE YOU REALLY HAVEN'T GOTTEN TO HANG WITH SINCE THE BEGINNING OF THE SEMESTER!



LEO

IN ORDER TO GET INTO THE STUDYING ZONE, LISTEN TO SOME HARDCORE ROCK AND ROLL. GET THOSE THINK-Y JUICES FLOWING (OR SOMETHING LIKE THAT)!



VIRGO

THE BEST IDEA TO GET MORE WORK DONE THIS MONTH IS TO SPEND MORE TIME IN LEO'S*. IF YOU'RE EVER HAVING PROBLEMS UNDERSTANDING SOMETHING, CHANCES ARE THERE'S SOMEONE IN THE CROWD THAT CAN HELP YOU.



LIBRA

IF YOU EVER COME OUT OF AN EXAM REALLY WORRIED THAT YOU FAILED, IT'S A GOOD IDEA TO CHAT WITH OTHER PEOPLE WHO MAY HAVE ALSO DONE POORLY. THAT WAY, AT LEAST YOU'LL HAVE SOME FRIENDS WHEN YOU'RE BACK FOR THE SUMMER!



SCORPIO

EAT GOOD, SLEEP GOOD, BE GOOD. THEN YOUR EXAM WILL ALSO BE GOOD. GOOD, GOOD. VERY GOOD. IN MEME TERMS, IF SOMEONE ASKS WHOM'ST'VE'S THE GOODEST BOI, YOU SHOULD PROUDLY RAISE YOUR HAND. OR PAW.



SAGITTARIUS

THE SEMESTER SEEMED TO GO PRETTY WELL, THOUGH NOW THAT YOU LOOK BACK ON THINGS, YOUR GRADES ARE REALLY QUITE ABYSMAL. BUT THAT'S WHAT 100% FINALS ARE FOR, AMIRITE?



CAPRICORN

IF YOU FIND YOU'RE LOSING MOTIVATION TO STUDY, DOWNLOAD SOME PICS OF RING DAY, ZOOM IN ON THEIR RIGHT PINKIES AND KEEP REMINDING YOURSELF THAT YOU COULD BE THERE ONE DAY.



AQUARIUS

THE STAR-VISIONS FOR YOUR PARTICULAR FUTURE ARE VERY FUZZY THIS MONTH. SOMETHING TO DO WITH CUPE 2424 PICKETING BLOCKING THE SIGNAL.....



PISCES

WHEN WALKING INTO YOUR EXAMS, MAKE SURE THAT YOU SIT NEXT TO THE NON-SICK PEOPLE (OR AT LEAST BRING DISINFECTANT). THERE'S NOTHING LIKE WRITING A HARD EXAM AND THEN GETTING NAILED BY GOOD OL' H1N1.

DISTRACTIONS

ALMOST TOO RELATABLE

ENG PHYS



What my friends think I do



What my mom thinks I do



What the media thinks I do



What my co-workers think I do



What I think I do

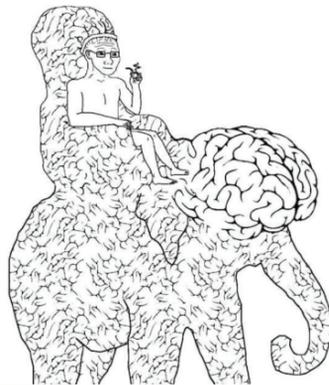


What I really do

When you're in the middle of an exam and the professor is explaining something to someone



When the average is 55 but you get 56



when you're driving and your friend mentions that cement is the same as concrete

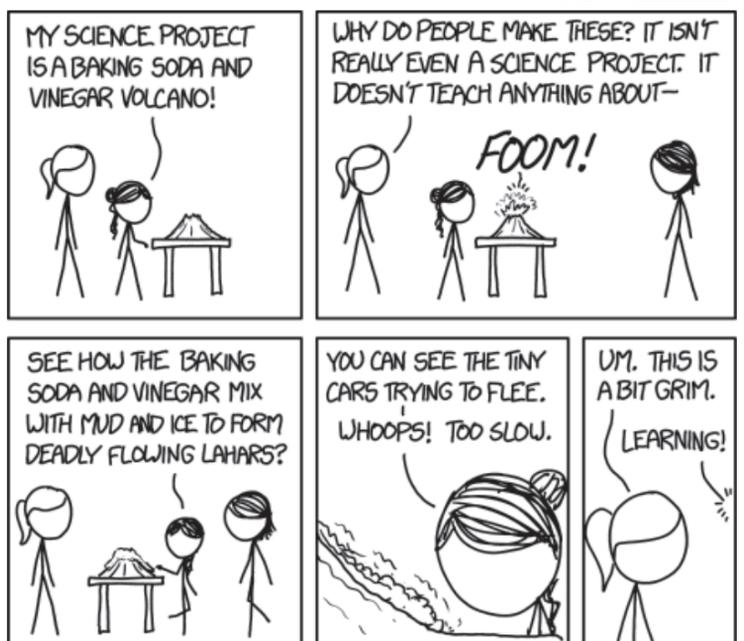
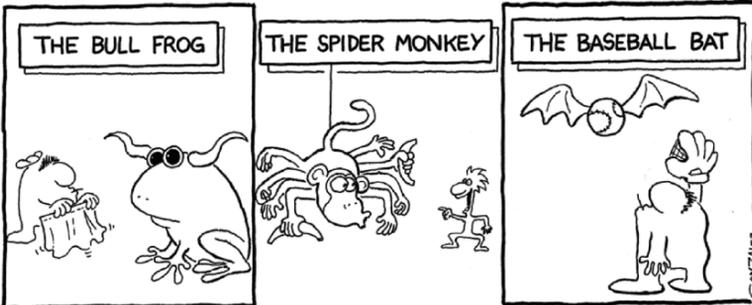


walking into work on Monday

Boss: hey how was your weekend-
Me:

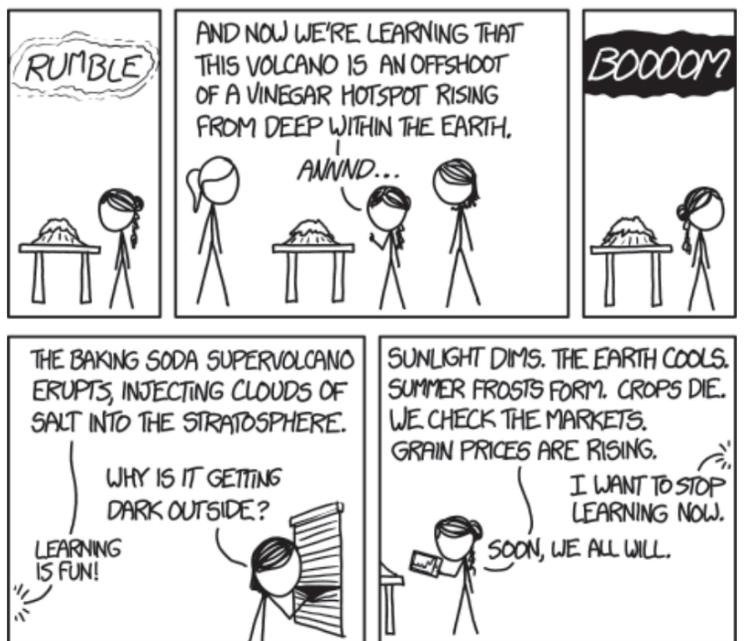


THE WONDERS OF GENETIC ENGINEERING



THE SANDWICH ALIGNMENT CHART

	INGREDIENT PURIST (Must have classic sandwich toppings: meat, cheese, lettuce, condiments, etc.)	INGREDIENT NEUTRAL (Can contain a broader scope of savory ingredients)	INGREDIENT REBEL (Can contain literally any food products sandwiched together)
STRUCTURE PURIST (A sandwich must have a classic sandwich shape: two pieces of bread/baked product, with toppings in between)	HARDLINE TRADITIONALISTS "A BLT is a sandwich."	STRUCTURAL PURIST, INGREDIENT NEUTRAL "A chip butty is a sandwich."	STRUCTURAL PURIST, INGREDIENT REBEL "Ice cream between waffles is a sandwich."
STRUCTURE NEUTRAL (The container must be on either side of the toppings, but not necessarily two separate pieces)	STRUCTURAL NEUTRAL, INGREDIENT PURIST "A sub is a sandwich."	TRUE NEUTRAL "A hot dog is a sandwich."	STRUCTURAL NEUTRAL, INGREDIENT REBEL "An ice cream taco is a sandwich."
STRUCTURE REBEL (Can contain any food enveloped in any way by a containing food)	STRUCTURAL REBEL, INGREDIENT PURIST "A chicken wrap is a sandwich."	STRUCTURAL REBEL, INGREDIENT NEUTRAL "A burrito is a sandwich."	RADICAL SANDWICH ANARCHY "A Pop-Tart is a sandwich."

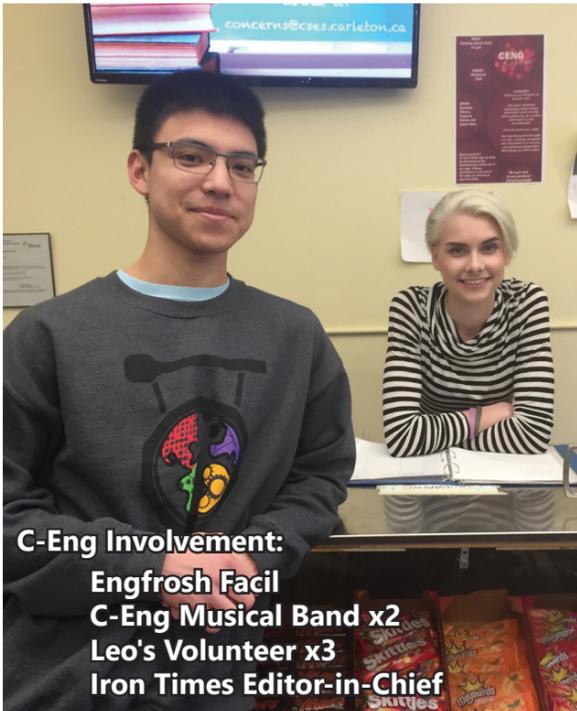


FOR THOSE WHO WERE SHOOK BY TACO SANDWICHES

LAST CALL

SOME CONTRASTING MUSICAL SELECTIONS

THE IRON MAN GABRIEL KARAM - CIVE II -



C-Eng Involvement:
Engfrosh Facil
C-Eng Musical Band x2
Leo's Volunteer x3
Iron Times Editor-in-Chief

Hailing from: Ottawa, Ontario.

Delicious Dish of your choice:

Just about anything really, but if I had to pick one, it would be cook-it-yourself Korean Barbecue.

What would be your dream job and why?

A crane operator! I loved those "building big" shows as a kid (probs why I'm in civil), and it seems like a rad thing to do.

Most Magical Moment:

Waking up at a cottage at daybreak, where there was still fog on the lake and everything was amazingly still and peaceful.

If you could travel anywhere, where would you go?

For a grand tour of... everywhere!

Favourite song/band/genre of music:

George Ezra & Harry Potter soundtrack at the moment :3

If you had one day left on earth, how would you spend it?

I would eat all the tastiest and most expensive foods, and then lie in the sun for a nap, because there are no more exams to study for.

One quote that really resonated with you:

"Omae wa mou shinderu" - Fist of the North Star

Would you rather be unable to speak, or unable to use any electronic devices (for one day)?

Unable to speak. #mimeway is the only way.

What holds the top spot on your bucket list?

Getting a pet dragon and saving the island of Berk~

Hit me with your best six-word horror story:

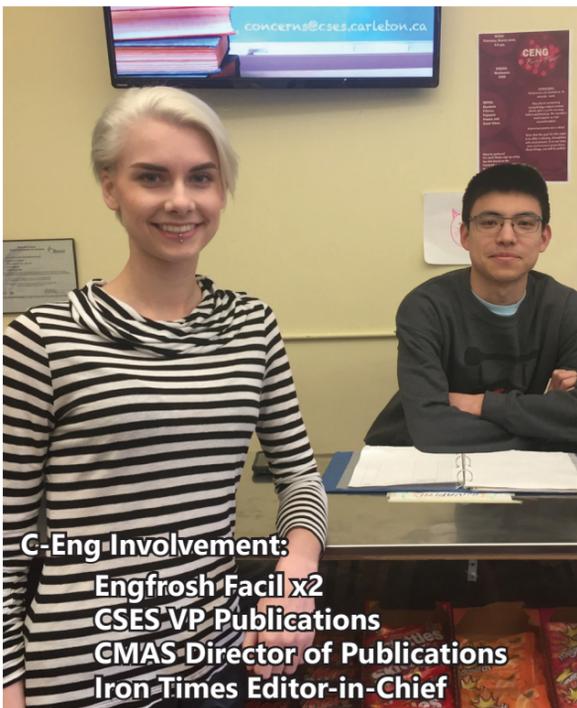
The exam is only 15 multiple-choice.



USES FOR THE CHARLATAN

- > Label the C-Eng musical "A family-friendly production"
 - > Make a life-size 4 poster bed for naps during charity LAN.
 - > Put a copy in space probes so that would-be alien invaders continue to believe there is no sentient life on this planet.
 - > Use to wrap lunch items, instead of plastic sandwich bags #ReduceReuseRecycle.
 - > Create a beautiful avant-garde ball gown for next year's reflections.
 - > Use as scrap paper for all of your exam studying needs.
 - > Fold into paper planes to throw onstage.
- You could read it

THE IRON LADY CASSIDY "NEXT" LANG - AERO C III -



C-Eng Involvement:
Engfrosh Facil x2
CSES VP Publications
CMAS Director of Publications
Iron Times Editor-in-Chief

Hailing from: Waterloo, Ontario.

Delicious Dish of your choice: Portobello mushroom burgers or literally anything with pesto mayo.

What would be your dream job and why?

Working for the NTSB because my work would really be making a difference (and specifically America's TSB because they have excuses to get in on almost every investigation).

Most Magical Moment:

Getting hired; it never gets any less exciting.

If you could travel anywhere, where would you go? Easter Island or the Aleutian Islands. The more remote, the better.

Favourite song/band/genre of music: Metal! If I had to be picky, At the Gates is responsible for two of my all-time favourite songs and they're also lyrically awesome, so yeah, them.

If you had one day left on earth, how would you spend it?

Break all the speed limits. It'd be like Grand Theft Auto except without the theft.

One quote that really resonated with you:

"She held herself very straight, like Audrey Hepburn, whom all women idolize and men never think about." -Jeffrey Eugenides

Would you rather be unable to speak, or unable to use any electronic devices (for one day)? Electronics GTFO. I don't even think I would be unable to speak if I tried.

What holds the top spot on your bucket list?

The 70000 Tons of Metal cruise stills holds the top spot, but also high up there currently is learning to drive my TT on the track.

Hit me with your best six-word horror story:

How can you listen to screamo?

Editor-in-Chief

Gabriel Karam

VP Publications

Cassidy Lang

Special Thanks To:

Some meme-ingful contributors, the Charlatan for being as high-quality as it always is, and all you readers <3

- Footnotes -

Issue Made Possible By:

Facil interviews
Crossword makers
1 new laptop charger
Adobe????

Last Words:

Thank you all for a great year!



THAT'S ALL FOR THIS YEAR!