who are we?!  The Bridge
The ESS’ monthly engineering magazine that connects engineering students with relatable stories about engineering culture, faculty events and welcome distractions from the busy workload.

Help build The Bridge by sending your submissions in! Be a part of the Publications team. Email avp.publications@ess.ualberta.ca for more information.

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Engineering Bucket List
A list of all the things you must, should, and/or will inevitably experience throughout the course of your engineering undergrad. We’re not saying you should check off all the items on this list. In fact, you might be happy never checking off some of them. But if you ever find yourself wondering what activities and experiences make up #engglyfe, here they are.

**ACADEMICS**
As the saying goes, C’s get degrees.
- Attend at least one MASC seminar
- Get an A
- Do better than you thought you did on a midterm
- Do worse than you thought you did on a midterm
- Let the curve save you
- Pull an all-nighter
- Appreciate the power of Wolfram
- Go to a professor’s office hours
- Skip a class to study for another class
- Panic when you get a watch list notification and scramble to get to BearTracks
- Find a group to study or do assignments with
- Fill your phone with pictures of notes

**EVENTS**
The best events are ones with free pizza.
- Engineering Carnival
- Country Crusade
- GEER Week
- Engineering Head Shave
- Pi Week
- UAEC, the annual engineering competition
- Spring Formal
- National Engineering and Geoscience Month
- An Annual General Meeting (AGM) for a club
- First Year Nights
- Career Fairs (for the free swag! And I guess maybe to get a job?)
- Campus Cup

SNAPCHAT: bucklingESS
Send us snaps of engineering life. Winners will be featured on Engglink & win a pad of engg paper!
Please be aware that all snapchats will be saved. So be careful what you send.
STUDENT LIFE
#engglyfe

- Join a club
- Learn the original “uncensored” engineering chants
- Take the ETLC elevator from ground floor to second floor, just because you’re too lazy to walk up the stairs
- Collect all special colors of engg paper
- Get day drunk after a midterm
- Go on a Domino’s diet during finals
- Golden Week: go to ALL your classes, labs, seminars for a whole week

- Watch a movie in an empty lecture room
- Vote in the ESS elections
- Walk into the wrong classroom
- Be too embarrassed to walk out of the wrong classroom
- Find your favourite study spot
- Stay late in ETLC Solarium
- Spend every day of reading week studying in DICE 8th floor
- Cry

WOW! What a Week!
by Nympha Escobar, Chemical III

Welcome back engineers! The summer is officially coming to an end and hopefully, all of you have made the best of it. Whether you are new to the university, a returning student, or a student who has yet to catch a break (summer classes weren’t that bad right?), we can all have one thing in common: a sheer excitement for the first week of the semester. A lot of things can happen in a week, and in such a short span of time, here are some highlights that you should be looking forward to every year!

President’s Address.
ORIENTATION DAY: This is an enjoyable day for first years as well as upper year students. Who doesn’t want to show their engineering pride by outcheering other faculties? (Y’arr! Show us your booty!)

TASTE OF THE U: For only a $2 donation to the Campus Food Bank, you can eat yourself into a food coma (or maybe not) and try samples of menu items from participating restaurants.

HYPNOTIST WAYNE LEE: It doesn’t matter if you believe in hypnosis or not, it’s an entertaining show nevertheless.

HEADPHONE DISCO: A unique experience where two DJs spin and compete for attention. It’s even more fun when you take off your headphones and observe the party in silence.

BEER GARDENS: A final chance to enjoy the weather with friends out in the sun served with food and beverages.

These events don’t stop in the first week of September, many more will come throughout the year especially ones organized by fellow engineers. This week is a good reminder to engineers of the importance of balance in order to survive. Sure there will be tons of assignments and projects, but don’t forget to sit back and relax. Cheers to a good year!

From the ESS Execs

The Engineering Students’ Society senior executives share their thoughts on the following question:

**Being in engineering is a love/hate relationship. What do you love and what do you hate?**

Josh Goselwitz
President

As with any faculty, there are pros and cons to engineering; points I like to share brag about with my non-engg friends and points I’d rather not bring up nor admit to about our faculty. Besides the rather large workload that comes with the degree, there are only a few hates I share with the best faculty on campus: no water fountains on 8th floor ICE, limited food options in ETLC, long lines at Tims and soon to be much longer lines since our favourite Tims lady is now gone :( and that sometimes unpleasant smell passing by the 2nd floor ETLC washrooms.
Overall though, I have to say there is much more love than hate in our faculty. We arguably have the nicest buildings on campus, you have over 4200 potential friends to make and engineering students are pretty enthusiastic - I heard we were the loudest at the President’s Address, good job OLs/TFs! Additionally and in the art of shameless plugs, our Faculty Association, the ESS, is pretty awesome. The ESS is the only FA on campus with a storefront; we have over 80 volunteers and one of the largest budgets as a student group, we organize the largest and most recognized faculty wide competition (#GW75), you’re going to have the opportunity to buy some pretty nice jackets soon and, we’re the first student group outside of the Ski and Snowboard Club to attempt filling FIVE BUSSES (250 PEOPLE) for a ski trip.

Being in engineering, there are several love and a few hate relationships we share together on our path to graduation. However, that engg love is always stronger and grows bigger each day as we experience together dehydration, caffeine withdrawal, insomnia and mild conditions of anosmia.

**Martin Wong**

VP Finance
Aksana Engel  
VP Internal - Fall

I love the hustle engineering brings to your life. I will forever hate the homework, 3 hour labs and dry lectures.

Celine Xiao  
VP Internal - Winter

I love how sleep has become a luxury and I've learned to greatly appreciate the rare days when I can sleep in. I hate how rare is more rare than giant pandas in the wild.

Kevin Wang  
VP Services - Fall

I've always loved the idea of creating. Like you might have been, I was the kind of kid that took things apart and put them back together... often unsuccessfully. I've always had questions about some of our most brilliant creations:

- Computers: how can 1s and 0s bring metal to life?
- Motor vehicles: how can cars so reliably turn gas into movement?
- Structures: how did they attach the D-ICE building to CME?

“These advanced engineering creations remind me of a quote by Arthur C. Clarke: “Any sufficiently advanced technology is indistinguishable from magic.” Since we build this technology, we’re magicians. Or more precisely, we’re the magicians of tomorrow. And right now, we’re in magician school: Hogwarts. So being in engineering is exactly like being in Hogwarts.

I love the idea that, one day, we'll be magicians. We'll bend water, fire, earth, and air to build machines and bridges. But the painstaking path to get there is not so fun. The reality is that we must practice potions, study Muggles, and learn so many fundamentals before we can touch the cool stuff. Magic is a dangerous art; we have a lot of power to impact the world, and because of that, we must use our powers wisely. I love the idea of creating, but I hate waiting and going through the gruelling path to get there.

But amidst the dreadful barrage of hard content and work, there are a lot of opportunities to practice magic outside of class. There are many clubs and project groups that will excite you and make you a worldly wizard or witch. Because there's so much more to being an
engineer than math or money: there’s the creativity and the human impact. Being on the ESS and working on side projects has made my engineering experience so fulfilling. If you’re feeling like learning a couple more spells and expanding your horizons, I invite you to get involved! Don’t wait for Hogwards to teach you magic; learn it yourself.

Katelynn Nguyen
VP Services - Winter

Here are the things I hated and what I would tell myself if I can go back:

Dear First Year Katelynn:

• Wear more comfortable clothes on the first day of university because your feet will die.

• Sit with people...or at least at the front of the class because you’re only pretending to hear the lecture at this point.

• Raise your hand to tell the professor you were confused.

• Deadlines will not kill you, nor will it be the end of the world.

• Remember to go to office hours.

• It is okay to cry after your first bad midterm.

• Be brave. Stand out.

• Use Google Calendar.

I used to hate the homework, the people around me that was smarter than I was - I hated everything because my life was not what I expected. I was no longer the star. When I saw those standing up there on stage, those volunteering and having the time of their lives, I hated them too! I would just sit there and I wondered how they could do all that. “They’re gifted.” Boy, I was just making excuses.
It is not the end of the world when something doesn’t go as you expected it, it is only a mountain that blocks what you could be. You just have to climb it.

For me, I always undermined my abilities. “There is no time for that” and “You’re the quiet and shy type - don’t embarrass yourself”. But you know what? With the help of those around me and my own urge to do what made me happy... I am here. I’m not the best there ever was nor did I catch all the pokeballs of happiness, but I’m different. I grew. I’m learning more about who I am - my shell does not define me. The years in high school, junior high, and whatever happened before this did not define me. I saw what made my heart beat and I went for it.

There are moments in life where you hit rock bottom - and being an engineering student, I learned that I better solve the shit out of these problems. Don’t think that this is a walk in the park - you better learn how to solve problems and persevere because they will never stop. And you will keep running. So stop, drop and roll, because it’ll be hard and sometimes you’ll be on the ground but all you gotta do is keep on rolling through and get back up there and smile.

Nick Seniuk
VP Student Life

Let’s start with the hate first. I hate how far engineering buildings are from the university LRT station. When it’s spring/summer, the 10 minute trek is bearable and borderline enjoyable. However, in the winter when it’s -20o, I would die for some sort of LRT connection to the engineering buildings. C’mom Civil, let’s start building some tunnels!

Hate rant #2: I hate how the Tim’s in ETLC is only open till 4:30. Do they even know how much business they are losing? I almost feel bad.

Now for the good stuff. I love 8th floor ICE. It is the perfect place to meet up with friends, do some work, or to reflect on all the work you probably should be doing. Because who cares, you are looking at some awesome views and not everybody is perfect. The space is so great that if Drake’s next album was Views from 8th floor ICE, it would go platinum instantly. Lastly, probably the thing I love most about engineering is the comradery there is between engineers. They say engineering is a cult and they are totally right! Not gonna lie, it’s probably because of the mutual struggle we all go through to endure 6, 7, 8 or even 9 classes a semester but the prize at the end of the road is worth it; a chunk of iron on your
finger (and an exciting career ahead)!! So keep on grinding Geers! Love the work you do, hate that the Tim's in ETLC is open at inconvenient times and be proud to be an engineer!

**Karina Sapelnikova**  
VP External - Fall  
I cannot say I hate anything about the profession. However, it is important for every practicing professional engineer to always remember to put the safety of the public before any deadline or budget. Any engineer who does not uphold their basic ethic rules does not have merit to their ring. Keeping that in mind, I'd like to address the positive end of being in engineering. I think my love for engineering started when I was young and doing puzzles and brain teasers over playing with barbies. Engineering is not about being able to recite every formula and physics law you have ever been taught; those are just tools. The job of an engineer is to solve everyday problems by generating creative solutions. It is a professional career where you work for the people, to improve the lives of those in your community and the world. Use this as a motivation to work hard during your education.

**Dayton Chen**  
VP External - Winter  
My favourite thing about engineering is all of the various events that have free pizza, the worst part of engineering is all of the pizza I eat.

On a more serious note, I love the fact that engineering has so many opportunities for students to be hands on with things that they've learned. We (for the most part) can see a direct connection between what's learned and what's applied in industry and academia really helps bring a sense of perspective to what we're learning as students. Not all disciplines or faculties are equal in this regard and I think that this is a blessing that our program provides us. With work experience, co-op, and our various student project groups I think every discipline has the ability to be hands on with their education.

What's frustrating about engineering is the lack of balance within our schedules. For people to pursue interests and hobbies or even work in what little spare time that we have between the assignments, lab reports and studying, you really have to evaluate every minute of every day, I really could not imagine working to cover tuition alongside engineering, seriously mad props to anyone who is doing just that, you're the bomb. Our lives revolve around engineering in a creepy obsessive way when you sit down and think about it; sometimes people from other faculties, friends, or family members simply don't get it. Maybe it's my own

“What's frustrating about engineering is the lack of balance within our schedules.”
ability to manage my time or any of these other factors but I feel so guilty when I'm not studying, doing assignments, etc and I don't think I'm alone in this.

For anyone still reading this, please don't forget to take at least some time for yourself! I know I'm going to spend the last bits of time before everything picks up to finish watching Narcos.
An International Perspective
by Deboee Mukherjee, Environmental II

“It’s only August and back home it’s still very warm… but here, I feel cold. Is this the normal weather for Edmonton?” — the burning question almost every newcomer international student has when they land on Canadian soil. Welcome to Edmonton – the land of weird weather! WINTER IS COMING — international students fear this line as much as the Starks fear it. For me, coming from a city where the lowest temperature ever recorded was 5 degrees Celsius, minus thirty is very, very cold.

Leaving home and going abroad for higher education is exciting... and scary. You’re leaving everything and everyone you love to go to a place where you don’t really know anyone. Going to a country that’s thousands of miles away from home and adapting their culture which is almost opposite to the one you grew up in takes a lot of courage. Living in a constant state of being broke because of the sky high international fees doesn’t really help either. For us engineering internationals, with higher course loads, sleepless nights and 8 AM lectures, sometimes it feels like you’re living your worst nightmare (yes, I’m talking about exam season). It may seem like we have the worst life one can possibly have but it’s not. Nothing matches the feeling you get when you finally get your admission offer, when after a hectic summer of getting the documents ready and applying for the visa, you finally get your passport with the stamp you’ve longed for, when you realize that your childhood dreams are finally becoming a reality.

Yes, it’s hard. There were nights when I sat under my desk and cried (Netflix makes me the drama queen I’m not!) or wanted to board the first plane leaving for Bangladesh. What kept me going was my friends, they were my absolute support system. Whenever I was feeling down, I shamelessly sent a text to whoever was online and talked it out. Trust me, it helps. The events organized by the International Student Services was a huge help. Not just ISS events, I actually went to every event that I could-- mostly the ESS ones (yay free pizza!). There’s about a thousand other engineering students with us and we are all suffering together! There’s always someone who will understand what you are going through, all you gotta do is talk to them.

From watching the first snowfall to observing the Northern lights, international students get to experience Edmonton in a way that domestic students can’t. For us, everything is new, everything is exciting (till the study load hits you at least!). You get to go to your first
headphone disco (Woohoo Week of Welcome!), watch your favorite artists live, make friends from all over the world and understand their cultures a bit more. And as Edmonton is a multicultural city, you get to taste food from all over the world too! If you ask me, that’s the best part. Yes there’s language difference, cultural shock, WINTER, birthday away from home but there’s also that first Banff/Jasper trip with friends, first time trying poutine and falling in love with it, first time skiing or skating and gaining lifelong friends as they become your family. International students experience a part of life that you can’t experience unless you go abroad for college. It takes a lot of courage, but it surely is an experience that you never regret.

Humans of Engineering
by Gillian Pierce, Computer II

Fresh out of first year, those smiling faces belong to Elizabeth Gierl and Ben Freeman, Electrical and Mechanical Engineering students respectively. After recovering from the emotional decimation that first year wrought, (just kidding first years, Ben and Elizabeth both stressed that although it was challenging, their first year was not nearly as bad as others made it seem) they concocted an ambitious plan for their upcoming year at the University of Alberta. What started as innocent and unfocused brainstorming over chai at Remedy, has
become a more concrete, albeit unpolished idea for a new vehicle project: building an Eco-Jet.

“We haven’t approached the faculty yet or anything,” says Ben; it’s an idea in its infancy, but an exciting idea nonetheless. A fascination with planes is what got Ben thinking about a jet related project. “It’s so useful, just all aerospace things,” he says. “Planes are never going away and more and more people are taking more trips, with longer distances and using more fuel.” Elizabeth was startled, after reading scary statistics in an Energy Matters newsletter. “Two percent of global emissions are due to planes and it’s one of the fastest growing industries in the world,” she says. Ben chimes in that “it’s incredible but also a huge problem.”

Both Ben and Elizabeth agree that jet fuel emissions are “a problem that really needs to be addressed”. Though they expressed doubt about having the capability or the resources to actually build a jet, Elizabeth and Ben believe that the crucial first step is to make the problem of air travel emissions an issue that is relevant at the University of Alberta.

“I imagine that the students who started AlbertaSat felt much like we do right now in terms of having an idea that is sort of out of the scope of your current capacity. But look where they are now,” Ben postulates. Elizabeth concludes that “we hope to build something small that can get things started, or even a really good model.”

Elizabeth and Ben shared some advice for the incoming first year class. Elizabeth emphasizes that you can only “try your best; your best is good enough” and recommends to “get help when you need it. Getting help was really big for me, especially in second semester”. Ben’s advice is that “adjustment is a big factor, so you need to find your own way and get enough sleep”. Both agree that it is important to “enjoy yourself! Work hard and play just as hard too.”

Poems for the Engineering Soul
by Aishwarya Venkit, Mechanical II

Here’s an uncommon engineering survival tip: read poetry! Below are some poetry suggestions for engineering students, which will surely calm your mind and give you that much-needed motivation for the new semester ahead. Whether you are feeling optimistic or desperately need to start things off on the right foot, this list is for you! You can also keep

“The crucial first step is to make the problem of air travel emissions an issue that is relevant at the University of Alberta.”
these in mind for the future, in case you need a little pick-me-up when things start getting rough. After all, who says engineers can't enjoy poetry?

**Invictus** by William Ernest Henley - The speaker reflects on his past struggles and looks on to the future with a notion of fearlessness. And don’t get me started on the last two lines. So much power!

**“I am the master of my fate, I am the captain of my soul.”**

**Still I Rise** by Maya Angelou - With references to pumping oil wells, backyard gold mines, and hopes “springing” high, it’s almost as if Maya Angelou wrote this poem for an engineering student.

**The Road Not Taken** by Robert Frost - This poem is such a classic that even an engineering student must have heard of it before. September is an opportunity for fresh starts; which path will you take in this chapter of your life? Also, if you’re not quite feeling the figurative theme of this poem, worry not. Just imagine Frost is standing in the “yellow wood” of engg quad in October, deciding to take the sidewalk less travelled by. Seems legit.

**I Wandered Lonely as a Cloud** by William Wordsworth - Uphold the spirit of summer meadows year-round with this Wordsworth classic. This poem will encourage you to indulge in introspection. For Wordsworth, thinking of the magnificent field of daffodils was enough to bring him happiness; look within yourself and find out what makes you happy!

**Sonnet 73** by Shakespeare - Autumn imagery with a powerful message: in this sonnet, Shakespeare creates a stark contrast between his imminent death and the concept of love, one which he believes we should strive to strengthen.

**Forgetfulness** by Billy Collins - Let’s face it, we’re all getting old. This poem will inspire you to live in the moment, and enjoy the good things while you’ve still got them! And let’s hope “forgetfulness” is not something you experience during exam season; equipped with a nostalgic tone and captivating imagery, Billy Collins is giving you yet another reason to study! I still remember the quadratic formula, do you?
Seven Places to Study
by Solbee Seo, Mechanical III

After extensive investigation of study areas at the university, I finally narrowed it down to 7 best spots on campus. The following locations are rated accordingly to its convenience, availability of outlets and proximity to food. For detailed building hours and locations, refer to pg. 220-221 of your Engineers’ Handbook!

1. SUB ★★★★☆
Compared to other spots, SUB is rather crowded and hectic. Nonetheless, tables are everywhere on both basement and ground floors. This is probably the only place with more than 3 different food places, hence an extra star earned. If you seek for peace of mind at SUB, there is an Alumni Room (quiet study area) near the ATMs. Open 24 hours, 7 days a week.

2. ETLC ★★★★☆☆
If you are brave enough to bear hard plastic chairs and withstand cold temperatures, ETLC is a perfect spot to study during spare hours as well as after classes. Tables are available from the second to fourth floors and most of them are equipped with outlets. There are also Timmies, Mr. SUB, Pizza 73, and assorted vending machines to keep your tummy full. If you wish to study at a more secluded place, try the quiet study area at Solarium near the pedway between ETLC and NREF.

3. Cameron ★★★☆☆☆
The standard place where science students study. Open 24 hours all week (just the first and basement floors, however!) Possibly the warmest place on campus during winter, but air gets a little stuffy once in a while due to the lack of windows. Basement and floors above the second floor are always a quiet study area, and there are also group study rooms which requires booking appointment in advance. When you are hungry but lazy AF to go to SUB/HUB, there are Starbucks, Timmies, and Panda Express inside CAB.

4. Rutherford ★★★★☆☆☆
Your degree doesn’t restrict you from going to an Arts Library. Rutherford Library consists of North and South sides. On South side second floor, there is the beautiful Harry Potter Room. Harry Potter room closes at 10pm while North side is open 24 hours (again, just the first floor). Since Rutherford is connected to HUB, you can go to HUB to grab coffee, cookies, or whatever food you like.

5. Donadeo ICE Building ★★☆☆☆
Newly added to the gorgeous Engineering buildings. On the 8th floor, there is a spacious
study lounge with plenty of tables. If you get tired of studying, once in a while, you can enjoy the view at the height of the highest building on campus. But sadly no food places...

6. NREF ★★☆☆☆
Tables are available only on the second floor, yet every table has an outlet. Inside the building, there is no food place other than Starbucks on the first floor; yet, there is a 24/7 available microwave. High ceiling and open glass windows also help you to believe that you are in a beautiful university building, not a dreadful jail. But same as ETLC: cold and hard chairs.

7. CCIS ★★☆☆☆
Recently, CCIS added few more tables on L1 floor and there are some hidden round tables around the building. CCIS is quiet after all the classes are over (after 5 or 6-ish) so you can concentrate on assignments, studying, etc. If you are briefly going over notes for a short period of time, there are couches (hard to get a spot, however) where you can even catch some sunlight through gigantic glass windows in winter.

Of course, if you are an adventurous person, you would already know that there are many other places like ECHA, John W. Scott Health Sciences Library in the hospital, Van Vliet, Agricultural/Forestry Centre, business building atrium, etc. But, for those who needs some guidelines, I hope this helps you find your own favourite study spot on campus!