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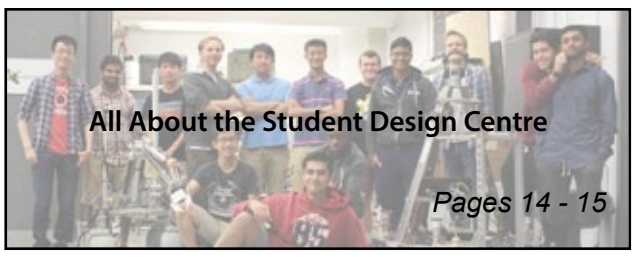
THE IRON WARRIOR

THE NEWSPAPER OF THE UNIVERSITY OF WATERLOO ENGINEERING SOCIETY VOLUME 36 FROSH ISSUE | WEDNESDAY, SEPTEMBER 2, 2015



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The Elements Are Unleashed

It's Time to Fight for the Supremacy of Your Team and Supergroup

BEN MORCOS AND NICOLA MUZZIN
SUPERHUGES

Hello all you brand new engineering students, and welcome to the University of Waterloo. You are about to plunge into the most innate adventure of your lives as we explore The Four Elements in this year's Engineering Orientation Week! Take pride in your colour team, but don't forget the big picture as you work alongside your brothers and sisters within your elemental team.

By now you've hopefully found your way to our website (engorientation.uwaterloo.ca) and learned a little bit about Waterloo's Engineering Orientation traditions. We hope you're just as excited about the week as we are, and that you're prepared to have one of the greatest and most welcoming weeks of your life! By now you've probably received your Orientation Kit full of all sorts of goodies and been put onto a colour team. Be sure to take a look through your kit; it has some great swag that will give you a taste of what to expect this week, along with some very helpful information. Tuesday is when the fun really begins! Remember to wear your Orientation shirt as well as pants or shorts that you don't mind getting wet! You'll start the day by finding your colour group's headquarters (follow the signs). Here, you'll be greeted by some of your leaders, the Bigs and Huges. Their job is to answer any of the questions you may have about Orientation Week or Engineering in general. It was not too long ago that they were in your shoes, so they know how you feel! You might get a little overwhelmed with the number of new faces you're meeting, but don't worry! You're all in the same position, so go and introduce yourself to someone as there's a 7.692% chance that they're in your class—and some of them may well become your new best friends. Enough about that, once you're in your headquarters, you might be a little scared, excited, or both! Now what, you ask? Tuesday is when you earn your Hardhat alongside your Bigs. You'll meet the Dean and the infamous Education Committee, and experience all sorts of exciting games and activities. Your Hardhat is your protection against the foes of Engineering and is a well-established tradition that ties together all of the great Waterloo Engineers before you. You must do everything in your power to protect this hard hat and all that it represents. Once you have earned your hard hat, you'll come together in a show of Engineering unity as you create a special design for the Aerial Photo.

Wednesday is your day off (unless you are in Software!), so take some time to get settled into your new home and explore with some new friends!

On Thursday, grab the multitool from your Orientation Kit and your freshly earned Hardhat as you'll put them to good use at Junkyard Wars! You'll have the opportunity to prove your ENGinuity using only items found in a massive pile of salvaged junk to build contraptions to meet the challenges of the day. In the afternoon, you'll have a chance to meet several student-run engineering design teams with which you can work and learn. Then you'll get to meet our Engineering mascot, the Tool. It's the ultimate and the all-knowing Tool (did we mention it also loves Engineering spirit and loud noises?).

On Friday, you'll participate in a battle of wits, hilarity, and creative genius during the final Engineering event: Scavenger Hunt. Go forth and try your hand at challenges such as Ultimate Calculus, Pool Noodle Jousting, and 3D Twister—not to mention that there's a 60-page Acquisitions List of things you can find to earn points and tokens for your team.

But wait there's more! During night-time cross-campus events, you'll get to mix and mingle with students from other faculties. Make sure you come out to events like Tuesday's Choose Your Own Adventure, World of Waterloo on Wednesday, Monte Carlo on Thursday, and put on your best Roman inspired bedsheets for Saturday Night's Toga party! Check your schedule to know all the details. We, as your SuperHuges, are part of the Engineering Federation Orientation Committee (EngFOC) and are here to help make this week as fun as possible for you. This week was created especially for you, so the more you put into the week, the more you'll get out of it. If you have any questions or just want to say hello, don't be afraid to stop us at any time! We are wearing gold jacket/vest things all week! Enough talking from us now! Now it's time to explore the intricacies of The Four Elements and prove to everyone that you are the ultimate, the infallible, and the true champions!

LISTEN UP, FROSH!

HEADCOM
EDCOM LEADERSHIP

The easy part was getting here, now you're going to have to prove that you have what it takes to be a Waterloo Engineer. You have a lot to learn, and not a lot of time to learn it, so pay attention, Frosh.

We are HEADCOM, and we are in charge. We control EdCom and Orientation Week. You have one job this week, frosh, one thing you need to remember—IMPRESS EdCom. We cannot stress enough how important this is.

EdCom is the Education Committee. We are your guides and superiors. We are a dedicated group of senior students who are the best and brightest that Waterloo Engineering has to offer. This means that we are the best and brightest, PERIOD.

EdCom participates actively in the Engineering Society, WEEF, and many of the student teams you will hear about on Thursday. EdCom is everywhere, EdCom does everything, and EdCom is NOT easily impressed.

EdCom will award you your yellow hardhat. If you earn it. This means that EdCom decides if you are worthy of being a Plummer; a true Waterloo Engineering student. Once you have your hardhats, we will keep testing your ENGinuity during Junk Yard Wars, and your resourcefulness and creativity during Scavenger Hunt.

On Sunday, based on everything we have seen, we will decide who has won the week, and who did not make the cut.

Good luck, Frosh. You're going to need it.

Dawn of the First Day

MEAGAN CARDNO
INCOMING
EDITOR-IN-CHIEF

Dear first years, first of all—congratulations! I'm sure you've heard the word more than once since you've gotten your acceptance letter to Engineering here at the University of Waterloo, but it is most certainly praise well deserved. You have an exciting few years ahead of you, and I encourage you to make the most out of every moment of them—starting right from this week. Orientation Week here at Waterloo is packed full of incredible events from dawn until dusk, and all of them are fun beyond belief. This is your week to enjoy, so be sure you don't miss out on any of the events; after all, you only get one Orientation Week in your undergrad, so don't kick yourself for not attending that one super cool event everyone is talking about because you couldn't drag yourself out of bed!

At any rate, I'll leave it to your Bigs and Huges to give you more about the details on Orientation Week. Be sure to check out the schedule on pages 10 and 11, as well as learn more about your own colour group on pages 4 and 5. First year only begins with Orientation Week. After that, it'll be time to put on your game face and dive right into classes. I could give you the same spiel about the difficulty gradient between high school and university I'm sure you've heard a thousand times over (which is repeated for good reason, take heed of the warning), but instead I will try to give you some concrete steps to help you in the first few weeks of classes.

First off, get a good rhythm going, circadian or otherwise. The weekly scheduling of classes and labs is going to inherently become easier if you find yourself a rhythm of sleeping, working, studying, and relaxing. You don't necessarily have to schedule your time, although you may find it helps in initially getting a feel for when and were you can make time for the things you want and need to do. But knowing that you can look forward to certain treats on given days, or ensuring that you have time to do your homework and lab reports can go a long way to reducing stress.

Next, experiment and adapt in that rhythm. Your first term is the best term to figure out what style of studying best suits you, what sort of extracurriculars you can excel in, who you can (and more importantly, who you can't) study with, and so on. I encourage you to investigate student design teams and groups, and see what suits you. If you end up joining a team, but find yourself unable to contribute due to work load, or more interested in investing your time elsewhere, there is no shame in changing your mind.

Finally, know when to treat yourself, and when to exercise restraint. This might seem rather obvious, but there are certain "crunch times" when you might have to give up things you normally can enjoy in order to get things done. Know when to say "no" to that movie night with your friends, and when staying up until 4 am playing *Super Smash Bros.* is proooooably not the best idea. And, on the flipside, when you finally finish those four assignments coincidentally due the same Thursday, or make it through midterm week, go ahead and splurge a little! You will thank yourself for it.

Of course, this is all just advice from one new Editor-in-Chief. Much like all of you are venturing into a new chapter in your life by the beginning of your university career, I too have an adventure waiting for me with managing the official newspaper of the Waterloo Engineering Society. I hope that I can practice my own advice in managing my responsibilities, and overseeing the production of entertaining quality content for all engineering students, both new and returning. As always, thank you so much to our contributors this issue, as well as to our previous Editor-in-Chief, Cameron, for making the job look way easier than it actually is. And to any first years interested in becoming a part of the paper, feel free to drop by the Iron Warrior office in E2-2347 on Tuesdays at 6:30 PM to attend one of our meetings. Have fun during your Orientation Week, and best of luck in your newest chapter in life!

This is the Best Week of the Term

CAMERON SOLTYS
OUTGOING
EDITOR-IN-CHIEF

Welcome, First Years, to the Best Week of the Term

So you've finally made it. University. Maybe you're striking out on your own for the first time. Maybe you think this will be a breeze. Maybe you are terrified out of your mind and the entire world is a bit of a foggy blur, like you're riding a roller-coaster in a sandstorm (I'm not an empath, just experienced). Whatever it is, this special Frosh Week Issue of the Iron Warrior is here to help. Within it, dozens of people from across the faculty and the university have come together to share with you their knowledge and advice, or to promote the myriad of awesome projects, groups, and teams available for you to join and participate in. Overwhelmed yet? Then let's start things off easy. The first thing you need to know is about the first week. About Frosh Week. That's why I'm here: to share with you your first task of having a spectacular time in this first, and incidentally best, week at Waterloo.

For starters, this will be a really easy assignment for you. Even easier than the easiest project of the easiest course (it's the midterm for PHYS-115, if you're wondering). Frosh week is the collective effort of hundreds of volunteers and staff, all intent on bringing you safely, happily into the wonderful Waterloo and Faculty of Engineering communities. Every day, there are awesome activities that will show you around campus, let you meet engineering students and students from other faculties, and introduce you to all the important traditions we have. All you really have to do is relax and let it happen.

One thing that is going to happen is that you will be deluged with information about campus and the services the University offers. There will be presentations about getting coop jobs, where to go with medical problems (Health Services, which will be pointed out to you several times), where to go for academic help (WEEF TA's, professors, and a long list more), the best places to catch a quick nap during an all-nighter (either Comfy Lounge or any hallway that's not too loud), and a dozen other things. You won't need all of these services, but do your best to soak it all in because a) you'll definitely need at least one of them soon and b) you really don't know which one that will be. But if you miss any of it, don't worry. Once classes start there are plenty of ways to find the resources you need, like the First Year Office or the university website.

The second that is going to happen is that there will be a ton of stuff for you to do. I mentioned before that there would be a lot of awesome activities, and I really meant it. Stuff like Earn Your Hardhat, where you will have to compete against other teams to impress EdCom—easier said than done—or Junkyard Wars, an event that will have you making anything from a piece of rope to a catapult. In order to make the best of these events, all you have to do it jump in. If you're nervous about doing an event, just tip-toe forward and you will soon find yourself on an unstoppable slide down the steep slope to orientation extraordinaire. But no one else can make you take those steps; you have to take them for yourself.

Best of luck.

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Class of 2020, Welcome to Waterloo Engineering!

PEARL SULLIVAN
DEAN, FACULTY OF ENGINEERING

I am very pleased that you have chosen the University of Waterloo to pursue your postsecondary education. Once again, we have attracted an impressive cohort of the brightest students to our first-year engineering programs, and you should take pride in joining our Faculty. You will be in the company of top researchers and teachers, dedicated staff, and motivated undergraduate and graduate students.

The Faculty values the importance of a vibrant, engaged student body, and the contributions our students make to Waterloo Engineering, the university, and the community.

The success of our students—academically, on co-op work terms, and in extracurricular pursuits—is a major contributor to our excellent reputation, and so we look for students who are well-rounded and passionate. The result is an involved student body, home to active student societies, competitive student teams, service-minded organizations, as well as newspapers, clubs, and bands. I encourage you to get involved in one or more groups or activities that inspire you and will enrich your Waterloo Engineering experience. Over the course of Orientation Week, you will be introduced to many new faces, a lot of new information, and a diverse offering of new opportunities.

During this week and throughout the year, you may feel overwhelmed at times, adjusting to new expectations for academic and workplace performance, learning the ropes of our co-op program and choosing among the abundance of extracurricular activities.

Always remember that there is a strong support system available to you. The First-Year Engineering Office is an invaluable service, here to help with your transition by offering academic and personal counselling, as well as tutor sessions and upper-year mentors. Your professors and teaching assistants are also excellent resources, and upper-year students can provide important insight. Take the opportunity this week to connect with your orientation leaders. After all, they were in your position not that long ago!

In the next few years, you will be presented with different career possibilities. Whether you aspire to work for a specific industry, get involved in innovative research, start up your own company, or all three, there will be opportunities to pursue your aspirations within your undergraduate program. Get involved and learn as much as you can.

Once again, class of 2020, welcome to our Faculty and enjoy your Orientation Week!

Sincerely,
Pearl Sullivan
Dean, Faculty of Engineering

Welcome New Archies!

SUGANDH GUPTA AND MICHAEL NUGENT
ARCHFOC

This week will be the journey through Architecture, Engineering, and through time. Navigating through the twentieth century, you will embark on the Battle of the Decades! During Orientation Week, you'll meet students in your program and faculty, explore both the Cambridge and Waterloo campuses, release creative energy, earn your first hard hat, and receive your drafting kit.

We're taking a three-pronged approach to Orientation — the City of Cambridge, university life in general, and Waterloo Architecture in particular. If you're reading this, you've probably received your Orientation kit. Dig through it and take a look at all your new stuff! It's just a sneak peak of what's going on this week and for the rest of the year.

We're kicking off on Monday at the school with registration and introductions. You're going to meet your future classmates! Soon after you'll meet your leaders, the Bigs and Huges, who will be with you throughout Orientation week and the fall term. Most of your leaders are second-year students who were in your shoes last year, and are there to answer any and all questions you may have about university life. Later on we'll play games in Victoria Park and race cardboard time machines around the school.

On Tuesday, we're making our way up to Waterloo to join the rest of the Faculty of Engineering. To spot Engineering amongst other faculties' Orientations, look past the brightly colored t-shirts and look for purple-dyed skin. We're going to take part in the Engineering tradition of earning our hardhats. You will get your yellow hardhats, and watch your leaders earn their green and red ones.

Wednesday will be focused on acquainting you with Waterloo Architecture and its surrounding neighborhood. In the morning you will embark on the Time Traveller's Adventure! You will then enjoy lunch with the Mayor of Cambridge and your 1A professors. In the evening, it's time to relive Art Attack with a flurry of glue and paint at Art Night. There may even be a little dance party.

On Thursday, we'll jump right back into Waterloo Engineering. You'll have the opportunity to show off your design skills at Junkyard Wars, where you'll help build a series of contraptions to impress EDCOM. When you participate in hash[TAG] Main Campus, you'll see how we plan on leaving your mark on main campus.

Back in Cambridge on Friday, we'll get you ready for school — school keys and studio set up. Getting your drafting kit is going to feel like the holidays!

Saturday will wrap up the week with the Black & Gold varsity soccer game, our Final Feast, and Toga Party to top it all off.

As the Architecture Federation Orientation Committee (ArchFOC) we're here to help make this week as worthwhile as possible. Getting adjusted to life in Cambridge is both exciting and challenging. As you and your classmates begin shuttling around this week, we hope to acclimate you as best — and as quickly — as possible. If you have any questions, feel free to stop us or any yellow jackets. We hope you're geared up for the adventure that is Orientation Week!

Follow us though the week on Facebook at Waterloo Orientation – Architecture, Instagram *@archorientation* and *#archUWOW15*.

WATER

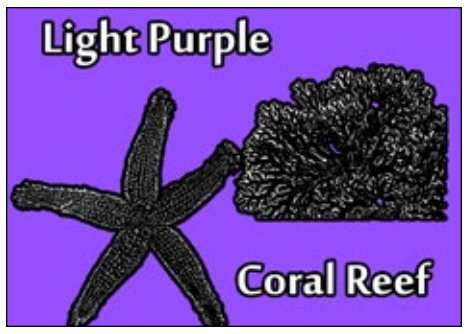
The Element of Persistance and Change

CONNOR, ELIZABETH, JARED, PATRICIA
DARK PURPLE HUGES

Ακούσατε! (Pronounced A-koo-ssa-teh, Greek for Hello!) Welcome to the wonderful city of Atlantis. Here, you'll find the best orientation leaders the Engineering faculty of the University of Waterloo has to offer. You'll also meet the best and brightest incoming students that will be your classmates and cohorts for your stay here at the university. We plan on sinking the other teams and conquering the whole week! This means we'll need all of you to be ready to flex those ENGinuity muscles. As we ride into battle on Poseidon's great seahorses and clash with our enemies, tridents in hand, none will be able to withstand the flood of our hoplites! First, we will train you in hoplimachia, where you'll earn your amour, the coveted Engineering Hardhat. Then, we will compete against the other teams in a test of engineering like no other. Like the Trojans, we'll build great machines of war and square them off against other teams. Finally, we will prove our worth as explorers and conquer the night itself. Board our triremes and set sail into a great week full of adventure! Looking forward to rising our voices in cries of victory.

RHIANNON, PATRICK, VICTORIA, KATHERINE
LIGHT PURPLE HUGES

Take a dive into the sea and explore the beauty of the coral reef! Clown fish, jellyfish, sharks, dolphins, crabs, mermaids, and many other critters have found there home in Light Purple and we want to welcome you to our family! Together we will go on adventures that will create memories that can last a lifetime, like those of Finding Nemo and the Little Mermaid. Our experienced team of coral reef and whale talking experts have travelled far and wide (Bob's Fish Mart, Pet Place, Fish-O-Rama, eBay, and Bikini Bottom to name a few) to arrive here in Waterloo. With your help and our combined skills, spirit, enthusiasm, and talents, we'll make it through every obstacle together! We can't wait to meet everyone's smiling faces! And remember folks: we are nice sharks, not mindless eating machines. If we are to change this image, we must first change ourselves. Fish are friends, not food. Just keep swimming, just keep swimming, just keep swimming, swimming, swimming!

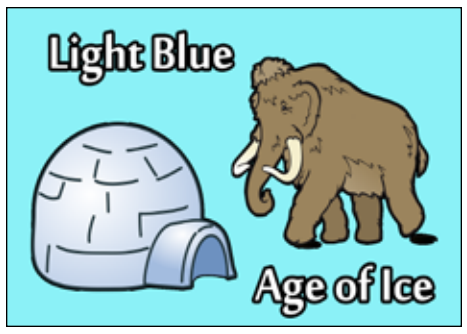


SHREYA, ELIZABETH, ALEX, CHRISTOPHER, JASDEEP
DARK BLUE HUGES

Hope you brought your swim trunks, get ready to get wet! We are the most notorious pirates who have ever been sunk to the depths of Davy Jones Locker. All will tremble as we emerge from the depths to help our team and fellow teams prove Water is the greatest of the four elements. Join us as we defeat harrowing challenges and overcome all obstacles in our way. Our leaders are here to make sure you have the best orientation week possible. Get yourself a t-shirt, get yourself a nickname, and get hyped for orientation week! Ask questions, make friends, and make memories you won't soon forget. Just remember, what is dead may never die, but rises again, harder, better, faster, stronger!

HANNAH, JOANNA, ANSON, ARYN, ANDREW
LIGHT BLUE HUGES

Night gathers, and now your Orientation begins. It shall not end until September 13, 2015. You shall wear light blue, and you shall win the week. You are the ice in the darkness. You are the watcher in the winter. Do you pledge your life and your honour to the Age of Ice for this night and all the nights to come? Welcome to Light Blue, Class of 2020! Bundle up, sharpen your dragonglass, and fortify the frozen walls. Prepare to embrace the cold and snow, for we are the wizards, walkers, and warriors of the Age of Ice! Glacial storms rage where we dwell, and to survive here you'll need every millimetre of your bravery and your engineering cunning. Now that you have sworn the oath, you will march with us in the battle of the Elements. We will pit the forces of Ice and Water against various beings of Fire, Earth, and Air. Only one team will prevail, and the outcome is up to you. Let's bring the winter and have some fun! Do you want to build a snowman?



EARTH

The Element of Strength and Fortitude

OLA, KISSAN, JASPER, DAVID
LIGHT GREEN HUGES

Two hundred million years ago, terrible lizards roamed the Earth, and held absolute power over all the other creatures on the planet. All that remains of these fearful reptiles is dust and bones… until now. To now reclaim the mantle of all-powerful ruler of the Earth, we're counting on you to take up the cause of the dinosaurs! To win, we must engage in a battle of epic proportions that will see the epic clashing of the elemental powers of Air, Water, Fire and Earth. Embrace the spirit of the Jurassic and let your inner beast come to the surface. The road to our victory is sure to be paved with glory, making the ultimate win even sweeter. Each and every one of you will have a vital role to play in the success of our team. Along the way your Huges and Bigs will be there to guide you on your quests. Remember: you must always be strong, stay fierce, and never back down from the challenges you will face. We are the Light Green Dinosaurs! #greendinosaursarebestdinosaurs #shrekisadinosaur

JENNY, BRADY, MICHAEL, HOLLY, BIANCA
DARK GREEN HUGES

The violent roar of the tiger can be heard in the distance, amongst the joyful songs of birds in the surrounding area. It echoes, nearly drowning out the gentle bubbling of the nearby waterfall. Everything is peaceful once again, but this time the canopy of dark green overhead does not feel as safe. What was once a tranquil setting now holds a new potential for danger. The soft slithering of the anaconda somehow resonates as if it were yet another roar, and the threat of this stunning location intensifies. Deceptive in its beauty, the jungle is fierce and unforgiving. Hello Dark Green Frosh, and welcome to Orientation Week 2015! We are your Dark Green leaders and we need your help to demonstrate the power of Mother Nature! As an Earth element, you'll need to bring the bare necessities (your strength, intelligence, spirit, and ENGenuity) to prove once and for all that Earth is the element that dominates all! Welcome to the Jungle, Class of 2020!

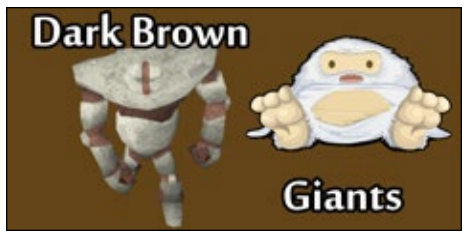
FARWA, MILLIN, DON, MELISSA
LIGHT BROWN HUGES

Welcome, first years, to the greatest adventure of your lives! You are about to embark on a journey to the most exotic place ever discovered by humanity; welcome to our "Journey to the Center of the Earth". Welcome to Team Light Brown! Prepare yourselves to battle through the forces of nature. Expect to encounter every element, especially rain and mud. Watch out, for there are all manners un beasts and weird creatures lurking in the strange places that you will have to travel. You will be tested, and will need to muster all of your creativity, teamwork skills, and ENGinuity to overcome the trials and tribulations of the week.

But never fear—you won't need to do it alone. Over the course of this Orientation Week, you fresh-faced explorers will master the chants and cheers, navigate the treacherous landscapes of the university, and do everything you possibly can in order to come out on top. Together with your seasoned guides (us, your Huges!), you will make it through your great Orientation Week adventure and you will be victorious!

LAURENCES, KRISZTIAN, SOPHIE, DANIEL
DARK BROWN HUGES

Fee Fi Fo Fum, we smell some first year engineers who want to have fun! As you may have noticed, our theme is Giants, representing Dark Brown! We are led by Huges Daniel, Krisztian, Laurence, and Sophie. We represent all things tall and menacing, and are waiting to stomp through campus and assert our presence as the masters of all the other, tinier teams. Along the way, we'll learn about life at Waterloo, get used to all that the campus has to offer, meet people from around the world, and most importantly, battle other engineering teams in a wide variety of tasks to see who will be crowned champions of the week! They better have a crown big enough for us!



FIRE

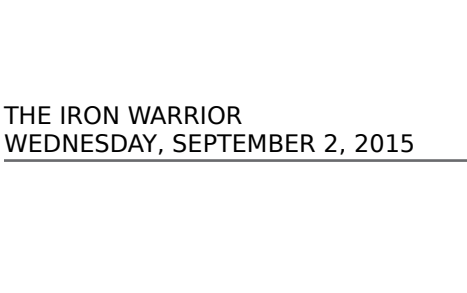
The Element of Power and Ferocity

BRENDAN, JENNA, SEO, JENNY
DARK RED HUGES

Welcome to greatest adventure in the universe(-ity)! You are stars, and as you gather on campus to begin the battle of the elements, you will lead the fire team to victory. Stars are the mightiest and most powerful objects in existence. The very fabric of space and time are warped by us. Together, we form the galaxy known as Dark Red, and we are here to outshine the competition! Want to prepare yourself for the battle ahead? First, come up with a star/space related nickname for Orientation Week. Also think of chants and cheers that will show how powerful the stars are. Brush up on your astronomy and watch movies like Interstellar or Gravity. Bonus points if you come up with new star-themed puns. You are the all-stars of orientation week; the bravest, brightest (pun intended), and best there is. Bring your multi-tools and water bottles, and get ready to blast off into a week of exciting action!

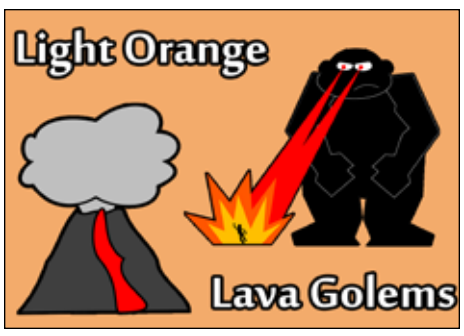
VIVIAN, MELANIE, SARAH, PATRICK
LIGHT RED HUGES

Bow down to the Fire God of Orientation Week, the Light Red Team! As the gods over all other colour groups, we stand above, we hold power, and we rule over all else. The mighty Light Red Team will rise above during Orientation Week, and as part of the Fire Supergroup, we will be unquenchable. We will spread like wildfire over the Earth, rising smoke through the Air and traversing the greatest bodies of Water. But most of all, we want to empower the first years (that's YOU GUYS!) to rise above. We want you to rule first year like you ruled Grade Twelve. We want you to get involved in clubs and teams, we want you to get the best co-op positions and we want you to understand your courses. We will make sure that you are equipped in the best way possible to accomplish YOUR goals, and burn all your doubts to the ground. To get ready for Orientation Week, come up with a fiery nickname, put a HUGE smile on along with your HUGES Patrick, Sarah, Viv, and Melanie and all of your BIGS, and get ready to have an AWESOME time!



CHECLSEA, JAMES, JANNA, SABRINA, TAYLOR
DARK ORANGE HUGES

Smaug, Toothless, and Maleficent are just a few of the creatures you will find in the lair of the Dragons. Visit our nest and be greeted by a species so incredible that it was once thought to be mythical. Fire-breathing and filled with confidence—don't be too intimidated—these mystic animals can play friend or foe. Gentle giants to those with the gift of Fire, but all else beware! When provoked, the Dragons' massive presence will be your demise. Although not a member of the Air tribe, with our majestic wings we will take to the skies. Our clan hails from all corners of the earth: from the Wizarding World and the Viking lands of Scandinavia to ancient Japanese landscapes and the rolling hills of Middle-earth. But our diversity only makes us stronger; each dragon bringing his or her experiences, skills, and talents. Together we have the power to dominate the Orientation Week Kingdom.



DANE, MICHAEL, JENNIFER, WOO
LIGHT ORANGE HUGES

Hello, class of 2020—we're glad you could join the hottest team in all of Waterloo Engineering Orientation week! We, members of the Light Orange (or L'Orange, for those of you in touch with your French side) Lava Golems, have been biding our time at the very base of the mountains to take the week in a volcanic fury! You've been selected to join our ranks thanks to your raw strength and burning passion; with you, we'll be able to smash through the competition and rise as victors. However, we won't be alone—the other fiery teams will also be joining us to prove that we're the best element! There are some things you can do to get ready for the week: think of some clever nicknames and make up some cheers to have our team stay pumped (if you can think of anything that rhymes with orange that isn't door hinge, kudos from us)! The other teams are fierce, and we'll be needing your help to prove to the others that we are, in fact, the hottest team out there! We'll see you soon!

AIR

The Element of Grace And Lightness

JOSH, RHIANNON, SARBAJOY, KENNETH
LIGHT PINK HUGES

Ready, set, fly! Join the Light Pink team in the vibrant and dreamy world of Kirby! It's the event of the year and we're taking to the air to do battle. With an occasional down smash we'll join with all the air teams to take on the other elements and show everyone who the toughest pink puff is! We'll have a cast of characters—both good and evil—teaming together for the greater good, at least for the week. Each of you has proven to be a valuable addition to the Kirby team. Together we'll explore the university services and the city of Waterloo terrain to prepare you for the world of Waterloo Engineering. It's time to get ready for an exciting week of pink fluff, engineering pride, and University of Waterloo spirit. So take a deep breath in, grab a hammer, and fight alongside us and all of Planet Pop Star in the battle of the elements!

HELENA, CALVIN, TREVOR, LISA
DARK PINK HUGES

Ca-CAW! Fellow birds of prey, Orientation Week is upon us! Adjust your feathers, sharpen your talons, and get ready to take the week by storm. This test flight will give you a bird's eye view of UW Engineering, university life, and the city of Waterloo as you get ready to take off on your own adventures. To prepare, you could practice your bird calls, befriend a chickadee, or swallow mice whole. We'll need all of your predatory instincts, eagle-eyed observations, and straight up strength in top shape to pull through the gamut of Earth, Fire, and Water that awaits us. Also, come ready with your own awful birdy and airy puns. Your Huges and Bigs look forward to meeting all you happy hawks, observant owls, fierce falcons, eager eagles, awesome ospreys, hardworking harriers, virtuous vultures, and brash buzzards. Welcome to the Dark Pink flock, and remember: the sky's no longer the limit!

BRANDON, STEVEN, BENJAMIN AND LAUREN
LIGHT YELLOW HUGES

Twas the night before Orientation Week, when all through campus… not a creature was stirring, not even a prof. The wifi connection was strong by the library in the square, in hopes that the Software Engineers would soon be there. The first years were nestled all snug in their beds, while visions of Orientation Week danced in their heads. And Tweety Bird in her cage and Sylvester in his box… had just settled their brains for a final full nights nap. Now that I've got your attention, I'd like to welcome you to the Lellow (light yellow) team! We are themed Looney Tunes, most notably the astonishing Tweety Bird. Prepare your mind and soul as we are about to embark on a week long journey of fun packed days, sleepless nights and tons of good times. Together with your fellow Looney Tunes pals we will fight tooth and nail (literally and figuratively) against the other colour groups to win the battle of the elements! This will be a week to remember and we'll be right by your side to guide you through the best week EVER. As Bugs Bunny would say, 'that's all folks! And see you in September'.

ADELE, RACHEL, MARIAH, ANKIT, PUNEET
DARK YELLOW HUGES

Picture yourself in the middle of the Sahara, with no idea how you got there. All you have on you is a cutting edge music player… curious, you play the song.... when suddenly the sand around you begins to swirl! You rise to the top of the sand dune, carried by the wind and sand below you. You stay afloat this incredible sandstorm for what seems like an eternity. It's then that you remember your music player. The song that's playing? It's Darude, welcoming you to a week of fun, community, and ultimately starting you on your journey as an Engineer at the University of Waterloo! As a member of the Sandstorm family, you're not just a single grain of sand - you're part of a great big dune of engineering students that cheers, purposely dyes themselves purple, and believes that duct tape is the answer to all problems. Since you're among the brightest students around the world, we're depending on you to help us weather the storm that is Engineering O-Week. Let your creativity and knowledge soar with you this Fall! If we all put our grains together, there will surely be success! Orientation 2015—so winderful you can't sand it.

What is the Engineering Society?

ADELLE VICKERY AND HANNAH GAUTREAU
ENGSOC PRESIDENTS

The Waterloo Engineering Society (commonly referred to as EngSoc) is the official representative body for all engineering undergraduate students at the University of Waterloo. It exists to support you academically, socially, and professionally during your time here at Waterloo. EngSoc serves its members in three main ways: representation, services, and events. You can find an overview of these points in this issue of the Iron Warrior or at engsoc.uwaterloo.ca

EngSoc is led by an Executive team who work on your behalf with the Faculty of Engineering, the student union, external engineering groups and many other organizations. It is up to the Executive to make sure that your voice is heard and that you are getting the most out of your five years here. The EngSoc Executive consists of the President, VP Education, VP Internal, VP External, and VP Finance; you will find articles from each of the Executive members in this issue. As a whole the Executive are responsible for ensuring the Society runs effectively and efficiently to better serve you, the students.

More important than the President and the other Executive is the Council. The Engineering Society Council is the group that makes all of the decisions for the Society, whether that be a stance on how the engineering students feel about a given topic or how to spend the $60,000 budget each term.

Council is made up of two representatives from each on-stream class, together sharing one vote. Their job is to attend all of the council meetings (usually every other Wednesday) and voting on their class' behalf. They report back to their class about what is happening within the Society, including the upcoming events and services, as well as any of the important issues that are being brought forward. You don't have to be a class rep to attend Council meetings; they are open to everyone and we encourage anyone interested to come out! Attending meetings is the easiest way to get involved in the Society and to stay informed on what is happening in the Society, Faculty, and University. Interested in being a class rep? The EngSoc Executive will be coming around during the first two weeks of class to run elections. Being a class rep is a great way to get involved and gain experience within the Society!

The Society is always looking for new initiatives and improvements. So we encourage you to get involved or to just let us know what you would like to see! Drop by the EngSoc Office (CPH-1327) any time and pitch an idea, or just say hi!

Welcome From the Presidents

ADELLE VICKERY AND HANNAH GAUTREAU
ENGSOC PRESIDENTS

Hi Class of 2020! We are your Engineering Society Presidents: Adelle Vickery (A-Society) and Hannah Gautreau (B-Society). We are both very excited that you are here and we can't wait to meet you!

As presidents we are the face and voice of the Engineering Society and our main role is to represent you, the students. We advocate on your behalf to the faculty, the university, the student union, and to other groups that affect your undergraduate experience. To do this effectively, we need your input! During the term, feel free to speak to us with any questions or concerns you have about school, university issues, or the Society itself. You can usually find us in the EngSoc office (CPH 1327) or our student lounge, POETS (CPH 1337). You can also reach both of us at *president@engsoc.uwaterloo.ca.*

We can also be found at all of the different events the Engineering Society runs each term. The first event is coming up quickly on Sunday, September 13. It's EngSoc Day! Each year we run a Charity Head Shave, dunk tank, and free BBQ starting at 11:00 AM outside Carl Pollock Hall, followed by our Beginning of Term (BOT) party at 6:00 PM in our lounge, POETS! We cannot wait for this year's EngSoc Day, and are looking forward to meeting all of you! The rest of our events can be found on the EngSoc website, engsoc.uwaterloo.ca/events, so make sure to check it out! There are a variety of events that run each term, and they're a great way to make friends, have fun, and get involved in university!

EngSoc is a wonderful community to be a part of, and we hope that you are all as excited to get involved as we were in first year. We have opportunities for everyone, and if there is something that you notice that we aren't doing, let us know! We are always looking for new ways to make EngSoc better for everybody.

If you want to know more about the Society and don't want to wait until classes start, Adelle and Kieran, the B-Society VP External, will be around for Orientation Week wearing white hardhats and would be happy to answer any questions you have!

We look forward to working with you, and we want to wish you the best of luck for your time here at Waterloo. Have an amazing Orientation Week, and see you on Tuesday!

Student Shops and Other Awsome Things

A Warm Welcome from Your VP Finances

ABDULLAH BARAKAT AND DON TU
VP FINANCES

Welcome to Waterloo, Engineers of 2020! We are Abdullah Barakat and Don Tu, your Vice-Presidents Finance (VPF) of the Engineering Society (EngSoc)! Don, the VPF of B-Society, will be on campus in the Fall and is very excited to be seeing all of your faces. Abdullah, his A-Society counterpart, will be around in the Winter term and is just as excited to meet those of you who will be around then. If excitement were a currency, we'd pay off all of your tuition fees and throw a massive party!

Unfortunately, emotions are not legal tender and we can't do that—instead, we're doing the next best thing, which is managing the Engineering Society's funds in ways that can help improve your experience as an engineering undergraduate student. For example, one of our main responsibilities is the creation of the termly EngSoc budget. This budget (funded by the $15.75 EngSoc fee that you pay every term) is where all the money for all of the great EngSoc events, services, and programs comes from. Every term, EngSoc Directors submit budget proposals to us, and we then work with them to create a budget that outlines where the money goes. Once we've decided on a fair budget and get it approved by the EngSoc Council, Directors are all clear to roll out the awesome events!

Another large part of our portfolios is managing the two shops that EngSoc runs: Novelties, the EngSoc merchandise/swag shop, and RidgidWare, an electronics and hardware store. Novelties, located right next to POETS in Carl Pollock Hall (CPH), is the only place on campus where you can get engineering-specific swag. We have shirts, sweaters, hats, scarves, glassware, and even pajamas available! On the other hand, RidgidWare is a handy source for all the things that an electronics hobbyist may desire. We have supplies such as LEDs, breadboards, Arduinos, and more!

Last but not least, we are in charge of the Student Deals program. If you've paid your EngSoc fee for the term, you can go to the Engineering Society Office in CPH and get the Engineering Society Student Deals sticker on your WatCard. With this sticker, you can go to various restaurants in the community and get exclusive deals! We currently have arrangements with over seven different stores and are always looking to expand the program.

That is all we have for you in this edition of the Iron Warrior. We thank you for reading, and also for supporting the Engineering Society. We hope that you can find something from the vast selection of EngSoc services, events, and programs that you can enjoy and benefit from. Until then, feel free to check out our website, engsoc.uwaterloo.ca, to see what's going on. You can also e-mail us at vpfinance@engsoc.uwaterloo.ca.

We wish you a great Orientation Week, and hope you say hi to us on campus!

B-Society, from left to right: Don Tu (VP Finance), Anson Chen (VP Education), Hannah Gautreau (President), Teresa Lumini (VP Internal), Kieran Broekhoven (VP External)

Academic Reps and Other Academic Services

Meet Your VP Educations

JEFF GULBRONSON AND ANSON CHEN
VP EDUCATIONS

Hey there, Class of 2020! We're Jeff Gulbronson and Anson Chen, and we're your Vice-Presidents Education. Anson will be spotted around the hallways of E2 in the Fall term (B-Society), and Jeff will be living in the Orifice in the Winter term (A-Society). Because education is probably the primary reason you're here (besides the lovely cityscape and the promise of being woken by honking geese every morning), you'll want to hear about the services and representation we offer!

Our job is to make sure you have the resources and environment to succeed academically, as well as on co-op. The two of us are responsible for representing engineering undergraduate students (that's right, all 7186 of you) at various faculty, university-wide and co-op related councils.

We get some help though. Within your first two weeks on campus, your class will elect academic reps for the term. Their job is to periodically meet with your profs and voice any concerns your class may have. This is an excellent chance to get involved right away, and no experience is required. We'll also have a first-year academic rep meeting where we'll discuss issues that affect all programs, and provide advice on being a great class rep.

EngSoc offers a variety of services to help you succeed, such as our online Exam Bank. We have old midterms and final exams for almost all of your core courses, many with solutions, so it's a great place to find study material. We also help run course critiques each term, where you get a chance to provide feedback on both your courses and professors.

You don't have to wait until the end of the term though! It's our job to gather student feedback throughout the term, so you'll receive various surveys from us asking for your opinion on things like co-op, workload and scheduling. You can also reach us at *vpeducation@engsoc.uwaterloo.ca* or in the EngSoc Office (CPH 1327), if you have any questions, concerns, or just want to chat about how first-year is going. Good luck, and we're both looking forward to seeing you on campus!

Keeping Waterloo Connected with Other Schools

Hello from the VP Externals

WILL WILMOT, OLA SUCHON, AND KIERAN BROEKHOVEN
VP EXTERNALS

Hey there! We are Ola Suchon, Will Wilmot (A-Society) and Kieran Broekhoven (B-Society), and we are your Vice Presidents External. We are responsible for all things outside of the University itself, and our portfolio covers a broad range of activities. From charities to engineering outreach to the Waterloo Engineering Competition, there will be plenty of opportunities to work with and get to know us, so don't be afraid to join in!

As engineers, we find it really important to make sure we're engaged with our community. For this reason, every year the student body votes on a charity that the Engineering Society supports for a full calendar year. We run plenty of charity events that you can volunteer at or just participate in. Be sure to keep an eye out for things such as Charity Grilled Cheese and/or Pancakes, Change for Change week and more! Stay tuned to find out what cause we will be supporting, as we would love to have your help!

As VP Externals, we are also your official representatives to external bodies related to engineering students and Professional Engineers. This includes Professional Engineers Ontario (PEO), the Engineering Student Societies' Council of Ontario (ESSCO), and the Canadian Federation of Engineering Students (CFES). There are numerous opportunities for everyone to participate in conferences with engineering students from around the country, and to share your experiences. This is a great way to learn about how other schools' Engineering Societies function and bring new information back to our school. Applications for the First Year Integration Conference will be released soon, so don't miss your chance to join our delegation!

Another major component of our portfolio is reaching out to students about the exciting and challenging field of engineering. This includes our current students, through the Waterloo Engineering Competition and National Engineering Month, as well as to younger students in collaboration with Engineering Outreach. The goal is to promote engineering as a fulfilling discipline, which we do through a variety of outlets.

We are looking forward to meeting you all, and we hope you have an amazing time here at Waterloo! Don't be afraid to reach out to us, or to try something new. Best of luck in first year!

Fun Things to Look Forward to This Term

A Message From the VP Internals

SARBAJOY MAJUMDAR AND TERESA LUMINI
VP INTERNALS

What's up, Class of 2020?

We are Teresa Lumini and Sarbajoy Majumdar, your VP Internals for Fall 2015 and Winter 2016, and we are so excited for you to join us here in Waterloo Engineering! It's our job to plan super fun events like pillow fights, talent shows, food making workshops, and laser tag trips, just to name a few, as well as provide services designed to help you with school and getting a co-op job. We even provide puppies to help you de-stress during exam times! We do all of this because the Engineering Society wants to do whatever we can to help you find your balance between work, school, and your social life!

Coming to you this Fall are a bunch of social events that cater to a variety of interests and are also a great way to hang out with your friends and meet new people in engineering. For starters, we have a semi-formal for everyone to get classy, and we put on a ridiculous and fun play every term (EngPlay), as well as allow engineering students to show off their various secret talents (TalEng). For those of you who are more into gaming we also have LAN Parties, board game, and card game nights throughout the term for you to enjoy! We also go on beach trips in the summer, ski trips in the winter, and laser tag in the fall!

To help you get that first co-op job we offer a bunch of services, from workshops to practice interviews. You can get your resume and interview skills critiqued by upper years in your program at Resume Critiques and the Interview Skills Workshop! If you want to learn some new skills to put on your resume, we offer technical workshops for both software and hardware skills, including MATLAB, Excel, Solidworks, soldering, and PCB Design.

We also have a bunch of programs and events just for first years! You can get paired with an upper year to show you the ropes with the first year mentoring program, or get more involved in the Engineering Society with the First Year Directorship program! We also run a First Year Leadership Conference filled with a bunch of workshops and events designed to help you learn more about leadership and how else you can get involved on campus.

We run a large range of events so that there is something for everyone! If you have an idea of an event or service you want to run or see, please let us know and we will try and make it happen to the best of abilities. Please feel free to email us with your ideas or if you have any questions about events and services provided by the Engineering Society at *vpinternal@engsoc.uwaterloo.ca*

Keep an eye out for emails and posters telling you about our events and services. Can't wait to see you there!

A-Society, from left to right: Sarbajoy Majumdar (VP Internal), Abdullah Barakat (VP Finance), Adelle Vickery (President), Jeff Gulbronson (VP Education), Ola Suchon and William Wilmot (VPs External)

Engineering Student Societies' Council of Ontario

MELISSA BUCKLEY
ESSCO VICE PRESIDENT
COMMUNICATIONS

Hello first year students! My name is Melissa Buckley and I'm the Vice President Communications for ESSCO this year. I'm also a 2A Chemical Engineering student here at Waterloo! ESSCO hosts a fantastic First Year Integration Conference (FYIC) every year, and I highly recommend you apply to be one of Waterloo's delegates. It is a great opportunity to meet your peers from other schools and get advice from upper year students, and it just happens to be a ton of fun. I hope to see you there, but first, you may be wondering: what's ESSCO?

The Engineering Students Societies' Council of Ontario (ESSCO) is an association of the engineering societies from 14 universities across Ontario. Since 1987, ESSCO has represented undergraduate engineering students to professional associations, academia and government with the goal of promoting "unity, continuity and visibility among Ontario engineering students."

ESSCO is in a unique position to represent the interests of the over 24 000 undergraduate engineering students in Ontario and as such it is important for their interests to take priority. ESSCO facilitates four annual conferences where executives and delegates from across Ontario come to share best practices, discuss the strengths and weaknesses of their schools and implement positive changes. The First Year Integration Conference (FYIC) takes place in the winter term and motivates first year students to become student leaders and to get involved with their respective societies. ESSCO's Annual General Meeting (AGM) occurs in May with a focus on professional development sessions and networking among the new VP Externals and ESSCO Executives. The President's Meeting (PM) is hosted every September for societies to discuss their progress, concerns and develop solutions for current ESSCO and engineering issues. Professional Engineers Ontario Student Conference (PEO-SC) occurs in the fall and introduces the delegates to Professional Engineers Ontario and encourages students to become Professional Engineers. These events are held by ESSCO's member schools, who place bids for the conferences they are interested in hosting. Waterloo Engineering Societies A and B are treated as separate member schools of ESSCO and both attend these conferences, holding two votes at plenary.

The benefit of ESSCO reaches beyond the students who attend these conferences and receive professional development and networking opportunities; the returning students become engaged in their societies and often go on to serve as leaders within their engineering community. By facilitating productive discussion between its 14 member schools, ESSCO improves student life by helping schools develop new services, improve current conditions, and solve problems.

As well, ESSCO wants to further understand what the Ontario engineering student experiences every day. Through a carefully crafted survey, ESSCO will produce and share data with the community at large in hopes of increasing the quality of education and the livelihood of classmates.

ESSCO is also responsible for facilitating the Ontario Engineering Competition (OEC), where top teams from each school demonstrate their design skills, creativity, and communication abilities through unique engineering competitions. OEC is an amazing opportunity for engineering students from across the province to showcase their exceptional skill and leadership capabilities while competing to qualify for the Canadian Engineering Competition. This year marks the 37th annual OEC which will be hosted by the University of Waterloo from January 29-31, 2016!

National Engineering Month (NEM), and Wonderland and Physics Day are two other major events run by ESSCO. These events have their own directorships and are part of ESSCO's efforts to promote engineering to the community at large!

ESSCO has recently developed a 5 Year Strategic Plan and hopes to offer even more value to its member societies and students in the years to come. You can find out more about ESSCO and what they can do for you by emailing your VP external, any of the ESSCO executive or visiting their website *www.essco.ca*

First Year Services

PALLAVI HUKERIKAR
FIRST YEAR COMMISSIONER

Hello and welcome to the Waterloo Engineering community! My name is Pallavi Hukerikar and I will be your First Year Commissioner with the Engineering Society this fall. My directors and I are excited to be running some great events to help you adjust to university and learn more about all the great aspects of the Engineering faculty.

Our First Year Mentoring Program links first year students with upper years in the same program. Throughout the term there will be numerous events for you to interact with your mentor and other mentees. Mentors are there to answer any questions you may have and to guide you along during your first year.

The numerous events run by the Engineering Society would not be possible without our wonderful directors. Directors plan and run events such as Coffeehouses, EngPlay (engineering play), snowboarding trips, and so many more! Our First Year Directorship Mentoring program matches incoming students with our existing fall directors so that first year students can get the opportunity to learn what it's like to be an Engineering Society director.

The First Year Engineering Leadership Conference (FYELC) is a two-day conference that will be held at the University of Waterloo on October 2nd and 3rd. Delegates will get the chance to meet other first years while attending sessions designed to help you adapt to university life, network with industry leaders, and learn about the coop process.

This year we will also be having a University 101 workshop to pass along a lot of tips about school, coop, and everyday life.

Throughout the term you can find out more about all these events by reading our First Year Newsletter. It's a great way to stay in the loop with the Engineering Society. You can also find out about these events under the First Year tab on the Engineering Society website here: engsoc.uwaterloo.ca/events/first-year, where you can also sign up for our mailing list.

Going to university is a huge step in your life and I hope to provide with you with the guidance you need to succeed. If you have any questions or comments feel free to send me an email at firstyear@engsoc.uwaterloo.ca. Again, welcome to Waterloo, and I wish you the best of luck with your first year!

WEEF Is Good

WESLEY SAK AND ERIC SHI
WEEF DIRECTORS

Welcome to all new engineering undergrads, and congratulations on your achievements so far. Over the next few years, you will have the opportunity to contribute to all the reasons that made you choose this school, and the Waterloo Engineering Endowment Foundation (WEEF) is one of the best ways to get started.

WEEF was founded by two Waterloo Engineering students, Avi Belinsky and John Vellinga, in 1990 with the goal "to continuously improve the educational environment for undergraduate engineering students, and maintain our outstanding reputation." Through donations from the student body, employer matching contributions, and alumni, WEEF has accrued over 13 million dollars in principal. This fund is professionally managed and the interest earned is distributed each term to a series of proposals that are evaluated by a student only council. It is this council for which you will be recruiting two representatives from each of your classes. The representatives will be voted on by the class and will attend proposal presentations and decision meeting to allocate the funding available.

The presentations will be given by faculty members, student teams, and clubs. As a representative, you will have the chance to see what each faculty is doing with their facilities, what student teams are working on, and what different clubs in the engineering faculty are up to. Faculty (i.e. possibly your professor), staff, and upper year students will be presenting to you. With each class represented, all departments vote on the funding allocation and help guide the University's funding decisions. Yes, the Engineering departments do take into consideration what students are funding when allocating their own budgets. This is how WEEF gives a strong voice to the students.

Over its 25 years, WEEF has funded many of your lab facilities and supported student teams in their accomplishments. If you see a yellow WEEF sticker on anything in the school, that was funded by a student only council. Take a look around your labs sometime; there are lots of these stickers. And if you're planning on joining a student team, you should know that WEEF contributed one million dollars to the construction of E5 and its Student Design Center.

So if you enjoy being more involved and better informed about your school, be sure to put your candidacy forward when we visit your class in the next couple of weeks or contact us at *weef@uwaterloo.ca*

Good luck on your academic and professional careers.

Engineering Society Services

ADELLE VICKERY AND HANNAH GAUTREAU
PRESIDENTS

The Engineering Society is proud to offer an amazing number of services. Here is a brief summary of what we can offer you so you know how to get around engineering and fully utilize everything that is available.

C&D (Coffee and Donut)

EngSoc runs a coffee and donut shop with the lowest prices on campus. Head over to the Carl Pollock Hall (CPH) Foyer for low cost coffee and treats! Each of you should have received a promotional voucher in your Orientation Week bag. Remember to leave your bags outside. Please note that it accepts cash only.

Don't forget to bring your pocket change, because the C&D is a cash-only establishment.

EngSoc Office (a.k.a The Orifice)

The Engineering Society office, also located in CPH, is a great place to get cheap printing, report binding, photocopying, and even business cards! Trust us when we say that cheap report binding will be a great thing for all of you in the near future. Please make sure to come by the Orifice to see everything we have to offer and to meet the lovely EngSoc Executive. You can usually find at least one working there!

The Novelties gift shop is located right next to POETS, the undergraduate student lounge.

POETS

POETS is our student lounge and is a great place to hang out between classes, play a game of pool, or even take a nap. It is open every day from 8:30-5:30 and for special events. There is a pool table, foosball table, and movies playing around the clock. Everyone is always welcome, but look out for our special "First Year Fridays" throughout the term!

Novelties

Engineering Novelties is your one stop shop for all Waterloo Engineering swag. Located between the C&D and POETS, it is open from 11:30 am to 1:30 pm Monday to Friday. We have a variety of items including sweaters, keychains, glassware, and much more! Come out and show off your Engineering pride!

Student Deals/Discounts

The Society offers a student deals program with discounts from local restaurants. Come by the Orifice to pick up your free student deals sticker. All you have to do is show your sticker at participating restaurants to get the discount. It truely is as good as it sounds!

Exam Bank

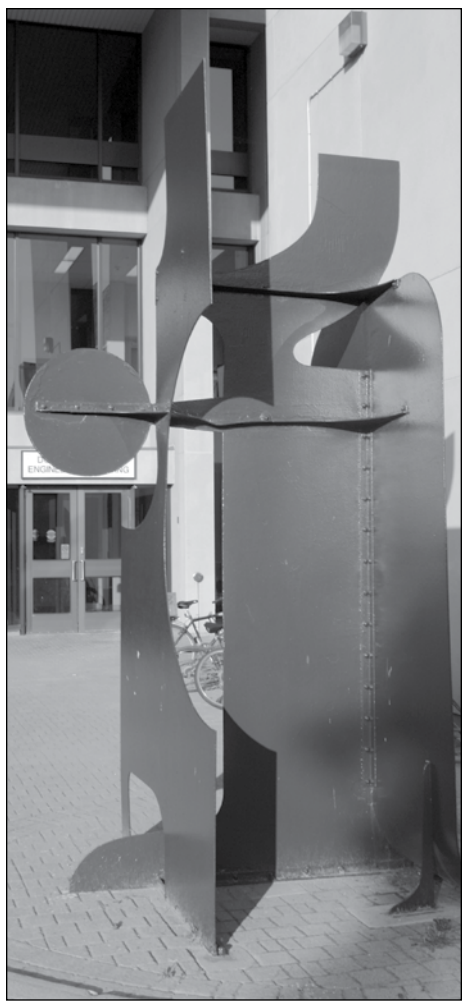
Midterms can be a stressful time, but we want to help with the stress by having an online exam bank where you can search hundreds of past exams to help you study. The exam bank will give you a great sense of what your first year exams will look like. It can be found on our website, engsoc.uwaterloo.ca/exambank.

Resume Critiques/Interview Skills and Jobmine-athon

Each term, there are thousands of students at Waterloo looking for co-op jobs. Finding that first job can be scary, but don't worry, because EngSoc has lots of great resources to help you succeed. EngSoc runs numerous resume critiquing sessions where you can get one-on-one time with an upper year student to go through your resume and ensure it is tailored to the type of engineering career you want. We also hold interview skills workshops where you can practice answering some engineering specific questions and a Jobmine-athon where we offer a step-by-step tutorial on how to use our job application software and cover everything from cover letters to prioritizing jobs.

Mental Health Services

Mental health is an issue that is growing among engineering students, but EngSoc has made it a priority to help you stay healthy. We run various events throughout the term to help you cope with stress. These range from a pillow fight to bringing puppies into POETS! We also run a mental health awareness week to help you learn about resources available on campus.



This sculpture, found outside CPH foyer, mysteriously changes colour throughout the year.

Frosh Week Event Schedule

Engineering students Schedule for On-Campus Residence.
Software differences noted below.

	7 MONDAY	8 TUESDAY	9 WEDNESDAY
9:00 a.m.	MOVE-IN / CHECK-IN Residences and Student Life Centre * Also on Sunday, August 31.	HQ TIME & MEET THE DEAN Colour Group Headquarters *Software to Waterloo Park Day @ 10:00 a.m. - 12:00 p.m.	
9:30 a.m.			
10:00 a.m.		DEPARTMENT LUNCHES Various Locations	SE 101 Math & Computer 1085
10:30 a.m.			
11:00 a.m.		EARN YOUR HARDHAT Various Locations	SOFTWARE LUNCH Mongolian Grill
11:30 a.m.			
12:00 p.m.			
12:30 p.m.			EARN YOUR TIE (MATH) Various Locations
1:00 p.m.			
1:30 p.m.		AERIAL PHOTO St. Paul's Green	
2:00 p.m.			
2:30 p.m.		ENG 101/DEPARTMENT HANGOUTS OR SINGLE & SEXY RCH/CPH Courtyard OR Hagey Hall	
3:00 p.m.			
3:30 p.m.	DINNER AND FLOOR MEETING Various Locations		
4:00 p.m.			
4:30 p.m.			
5:00 p.m.			
5:30 p.m.	WARRIOR WELCOME Various Locations		
6:00 p.m.			
6:30 p.m.		CHOOSE YOUR OWN ADVENTURE Various Locations	
7:00 p.m.			
7:30 p.m.			WORLD OF WATERLOO Various Locations
8:00 p.m.			
8:30 p.m.			
9:00 p.m.			
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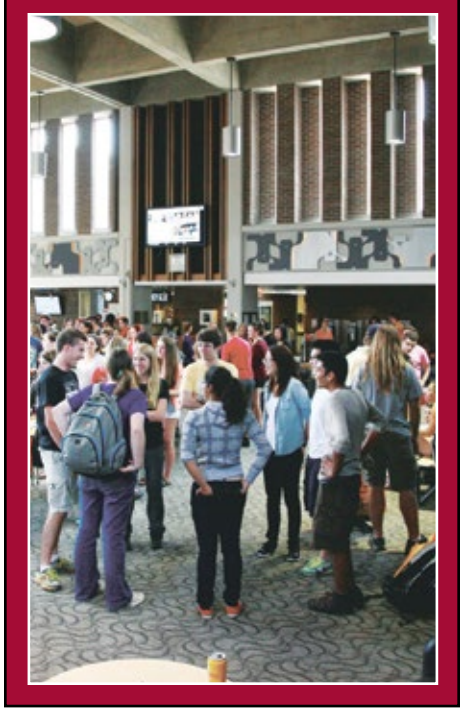
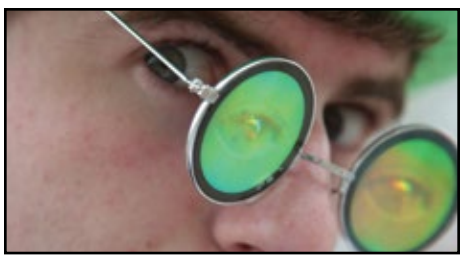
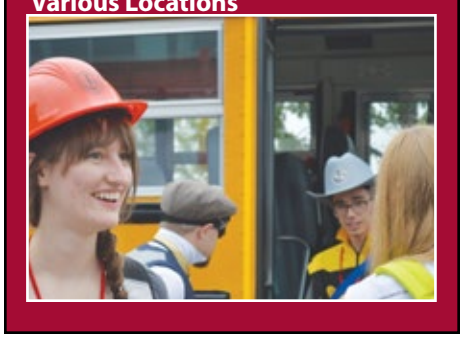






Engineering

Aerial Photo

Taking place immediately after Earn Your Hard Hat, you will head to St. Paul's Green for an Aerial Photo. This is one of the only times until graduation that the entire class of 2020 will be in the same place for a photo. The photo design will reflect the theme, The Four Elements, and the finished product will hang in POETS for the duration of your undergraduate career and beyond!

Department Lunch

This is a great opportunity for you to meet your fellow classmates, upper year students in your program, as well as your TAs and Professors. It's a great chance for you to learn more about your department, get useful tips on how to succeed, and have any questions about your program answered.

Software: Faculty Lunch is held in place of Department Lunch

Earn Your Hardhat

Earning your Hard Hat is one of the oldest traditions in Waterloo Engineering Orientation. The Hard Hat is a prestigious item awarded to incoming Engineering Students and is worn with pride by all. During this event you will, with your team, compete in several challenges centred around the 6 Pillars of Engineering. This is an event you won't want to miss out on, you'll be needing that hard hat for the rest of the week.

Eng 101

This is your chance to be introduced to the academic world of Engineering at the University of Waterloo. Faculty members along with a student panel will provide information and answer questions about academics, co-op, counselling, and the fine balance of school and socializing.

EngSoc Day

The Waterloo Engineering Society will play host to a fun afternoon of bouncy castles, dunk tanks, a BBQ, and more! Come to POETS, the engineering student lounge, and see what EngSoc can do for you!

Engineer's Apothecary

Get a taste for all the great things available to you as students. You will be shown a collection clubs and services from all over campus that will help you on your journey. Then defend the honour of your team as you test your new knowledge in games!

HQ Time & Meet the Dean

During this time you will get the chance to come into your teams Headquarters and meet your fellow first-years as well as your leaders. You will get an intro to the week and meet the Dean of Engineering, Pearl Sullivan. You will also participate in fun icebreakers to get the day started and to see a virtual tour of the Engineering Campus.

Software: Meet the Dean will happen first, followed by Waterloo Park Day.

Junkyard Wars

Our flagship event, Junkyard Wars, is exactly what its name implies. Colour groups are challenged to solve problems and complete challenges using only recycled materials and scrap parts. This event is the true test of ingenuity, creativity and plain old smarts.

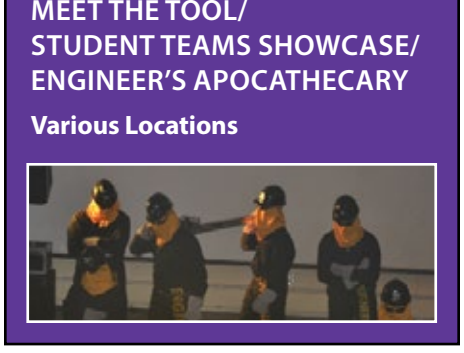
Meet the Tool

This is the oldest and most sacred of traditions at Waterloo Engineering. This

All photos credited to Frosh Media & EngSoc.

Engineering | Software | Math | Cross-Campus

10 THURSDAY	11 FRIDAY	12 SATURDAY	13 SUNDAY
JUNKYARD WARS Village 1 Green *Lunch @ 11:00 a.m. Grad House Green	EXPERIENCE WATERLOO BMH Green/ Physical Activities Complex	BLACK AND GOLD DAY Warrior Field / Columbia Icefield	ENGSOC DAY/ CHARITY HEADSHAVE POETS Patio / Carl Pollock Hall
MEET THE TOOL/ STUDENT TEAMS SHOWCASE/ ENGINEER'S APOCATHECARY Various Locations	ENG 101/DEPARTMENT HANGOUTS OR SINGLE & SEXY RCH/CPH Courtyard OR Hagey Hall	SCAVENGER HUNT Grad House Green *Software can choose to do the Math Scavenger Hunt	MONTE CARLO Student Life Centre/ Physical Activities Complex
TOGA PARTY BMH Green/ Student Life Centre			














is a must see event where you will get to meet the majestic Engineering Mascot 'The Tool,' a 60-inch chrome-plated pipe wrench. Tool is love. Tool is life.

Scavenger Hunt

The infamous Engineering Scavenger Hunt is where the colour groups have their last chances to try to gain points and win the overall competition of the week. There are countless activities for everyone and also a never-ending acquisition list with items for you to collect. This is the final flagship Engineering event and is sure to not disappoint!

Software can also choose to participate in the Math Scavenger Hunt

Cross-Campus

Black and Gold Day

Come join us for our annual Black and Gold Day! Show your Warrior pride by coming out to the carnival and cheering on our Varsity Football team. Don't forget to wear your black and gold!

Residence Programming

Meet your fellow floormates and your Don as you learn more about your residence community and have your first floor meeting.

Monte Carlo

Orientation's annual semi-formal comes complete with red carpet, live music, a mock casino and more. Dress to impress with this night of class and elegance.

Move In / Check In

Move into your residence by picking up your keys and move in packages from your residence Front Desk. Remember to have government issued photo ID or your WatCard ready when moving in.

Once you're done moving in, head over to the Student Life Centre (SLC) to pick up your student card if you haven't already. Remember to check in for UWOW14 by picking up your wristband and swag bags!

Single & Sexy

An original drama production by the University of Waterloo, this hilarious play deals with the challenges of living away from home and out from under the parental eye for the first time. Issues explored include sexual harassment, orientation, sexual assault, transmitted infections, pregnancy, love, and succeeding in University. With several TV and music video farces, the play promises not only a humorous view of student life, but also delivers crucial information about the topics discussed and how to find help regarding those issues.

Toga Party

This is the final night of Orientation programming! A giant Toga dance party at BMH Green, coffee house, a bonfire, improve and magic will help close the week with a bang!

Warrior Welcome

Get your official Waterloo welcome by getting together with all of the 6000+ incoming first-year students for the largest icebreaker you'll ever have the pleasure of experiencing! Also a special appearances from the University's President, Feridun Hamdullahpur, and Feds' President, Chris Lolas.

World of Waterloo

Get a chance to mix & mingle with new students from other faculties while learning about the campus and the City of Waterloo.

Engineering Programs at Waterloo

Architecture

RAIN MAKI AND JASON MCMILLAN
3B ARCHITECTURE

As you may have discovered already, we don't call Waterloo home, but rather a historic building at the heart of the old Galt neighbourhood in the City of Cambridge. The refurbished Riverside Silk Mill sits on the banks of the Grand River and will soon become your home sweet home.

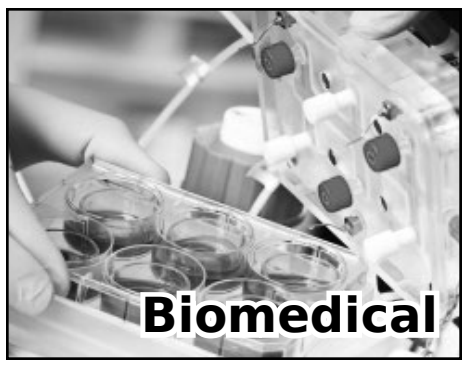
In your first year you'll be tossed into a whirlwind of learning, challenging you to develop knowledge in architectural design, building science, cultural history and visual communication. Expect to become immersed in the world of architecture, indulge in all things design at the Musagetes architecture library, explore living metropolis of New York City, and maybe even get an exacto knife cut or two along the way.

While academics are a huge part of first-year architecture, it is also time to explore your own interests with your new classmates. Our campus offers a wide variety of extracurriculars to choose from, including Waterloo Architecture Students Association (WASA), BRIDGE, F_RM-LAB Build, coffee houses, yoga mornings, hockey evenings and much more. We join our Engineering friends for Archineering events and Of Term Parties. After all, we're only a short bus ride apart!

The school has a dynamic and tight-knit community, where your peers are your greatest resource. The third floor studio is full of creative energy, where ideas spark, people collaborate and friendships form.

Best of luck, and much love from your new family at Waterloo Architecture!

Biomedical



CAMERON SOLTYS
OUTGOING EDITOR-IN-CHIEF

Welcome, Biomedical Engineering students, to your new home at Waterloo. Your department may be the infant of the family, but that just means we love you all the more!

Your time at Waterloo will expose you to all sorts of wonderful ideas and technologies as you learn how to marry technology with the increasingly-important field of medicine. You will learn to work with doctors and policy makers, biologists and engineers to speed you on your way to a successful career in the the eternally growing field of technology-based medical care.

Upon graduating this program, you will have the ability to understand and model complex biological systems, and the skills and experience to design new tools and products to improve the lives of people all around the world. That may seem far away as you toil through your more general first-year courses, but stay sharp as these general concepts will be reused and reinterpreted as you get into more complex concepts like biology, digital signals, medical imaging, and design.

Learn from the class that went before you, and broaden the path even more for the generations of students that are sure to follow after.

Chemical

WILL WILMOT
3N CHEMICAL

Congratulations class of 2020!! Now that you're here, get ready to learn about distillation, energy balances, process controls and well, I guess a little bit of chemistry mixed in there. Along with first year comes preparing a resume, many hours spent slaving over Excel and TONS OF FUN!!! Once you're through most of your first year, you'll learn more about separation processes and bioprocess engineering which are studied by chemists and scaled up by future engineers like you! Most of your first year courses are fairly general, Chemistry, Linear Algebra, Calculus, and Physics with a lot of concepts being review of material covered in high school. Don't be afraid to go to help sessions, ask a classmate or join other sections of the core classes for a fresh perspective! In addition to the Engineering Society, the Chemical Engineering Student Society (UW CESS) also puts on fun events to take your mind off things. Now is the time to find a good work-life balance before the going gets tough!

Civil

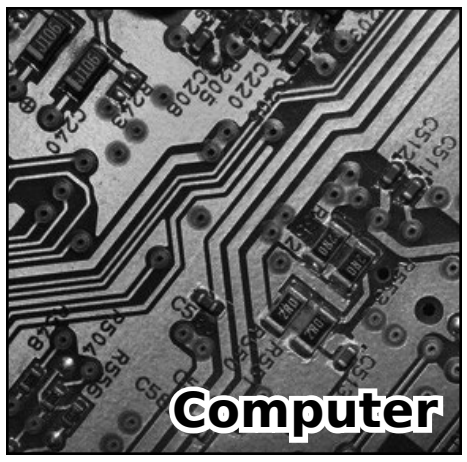
NANCY HUI
CIVIL '15

Welcome, class of 2020, to the wonderful world of civil engineering! Civil engineering is the second oldest discipline of engineering, after military engineering, and deals with road networks, transport systems, excavations and mines, structural systems, sewer systems, material sciences, and construction scheduling, to name a few. In first year, you will take general courses in chemistry, calculus, physics, and linear algebra (Protip #1: Once you finish linear algebra you'll want to forget it forever. But don't - it'll come back to haunt you in third year.). You will also learn how to survey on Columbia Lake, identify rocks and minerals in the Earth Science labs, program with Matlab, and loads of other impressive things.

Take advantage of your co-op terms to experience different work environments – and not just things you think you'd want to do. Visit construction sites. (Protip #2: if you don't have a driver's licence, get cracking on it RIGHT NOW.) Spend a work term in the oil sands. Work in the public sector. Work in the private sector. By the time you reach 3rd year, you'll know which areas you'd like to specialize in, and will be able to take the corresponding technical electives in water resources, structural engineering, transportation systems, and more!

Until then, don't be afraid to seek help from your TAs or your profs! Ask questions in class and visit them during office hours. But also remember there is a world outside the campus and people outside your class: get involved and write for the Iron Warrior, represent your class at EngSoc meetings, or compete with the Concrete Canoe and Concrete Toboggan teams.And don't forget: CIVILS ALWAYS WIN.

Computer



ANTHONY CLARK
4A COMPUTER

Do you like calculus? Do you like Boolean algebra? Do you like designing multistage differential amplifier circuits at 3 in the morning? Great! You've come to the right place!

Partial joking aside, welcome to Computer Engineering! You probably already have an idea of the problems Computer Engineers work on – digital hardware, firmware, and even some analog circuits for when there are no Electrical Engineers nearby. In the year ahead you will build up skills in the fundamental areas of Computer Engineering, including Physics, Calculus, Programming, Circuits, Digital Logic and Discrete Math.

The best advice I can give is to ensure you put a good amount of effort into your courses, you will thank yourself later on! On the other hand, do make sure to get involved in things outside of classes – sign up for an intramural team, or join a few clubs. Wondering how to find the right balance? This is one of the most important challenges each of you will face while transitioning into University, take advantage of the resources available to help you figure it out (TA's, Engineering Society, First Year Office etc.)

Finally, some of your will be introduced to co-op in the next few weeks. While it may seem daunting, Computer Engineering opens up some fantastic opportunities in the tech world. Spend some time perfecting your resume and practicing for interviews, and you may just find yourself on your way to your dream company.

Now go ahead and begin the best 5-7 years of your life!

Electrical

AUSTIN COUSINEAU
4N ELECTRICAL

Welcome to the University of Waterloo, and congratulations on choosing Electrical Engineering! You have an exciting path ahead of you. This year will be full of new experiences. You will need to enforce good study habits, and put the effort in to succeed. You will be taking a wide variety of courses ranging from circuits, programming, math, physics and more. Do your besEt to study them well, as what you learn will be needed in courses and the workplace later on. First year will be full of exciting firsts for most of you, such as interviews, internships and independent life. Make sure you put a lot of effort into your resume, and make sure to take advantage of the resume critiques run by our lovely Engineering Society. You are sure to encounter some tough times as you adjust to the new world that is university. Everyone will, so don't be afraid to reach out for help when you need it. Take advantage of your TAs, professors, advisors and classmates – you're all in this together. But while this is all very important, don't forget that university is a social place as well. Make time to go the various events on campus, meet people and check out the various student teams that would love to have you join and help out.

Environmental

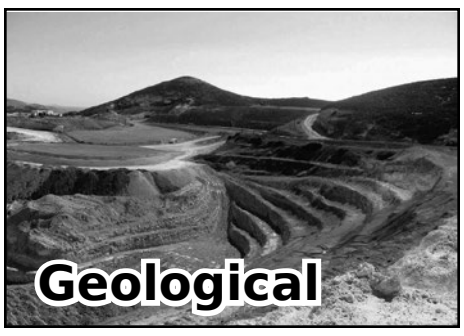
KRISTINA LEE
4A ENVIRONMENTAL

Welcome and congratulations on being selected to be a part of Environmental Engineering at the University of Waterloo! We're happy to have you and hope you enjoy your 5 years here.

Environmental engineering focuses on the chemical and biological world around us, with a strong focus on water systems. Your first two years, although not the most fun, are very important to create a foundation of knowledge you'll need in your upper year courses. Upper year courses are where you'll get to delve deeper into topics of interest to you. One of the best parts about environmental engineering is that we get to do quite a few outdoor labs! In 1A you'll be outside for about 5 weeks learning the basics of field surveying through hands-on field labs. The information you gather there will help you determine a solution to the problem posed in your concepts course.

You may feel bogged down with work but remember to have fun, hang out with your class, and talk to upper years. We can't wait to meet you and have a fabulous time during O-Week!

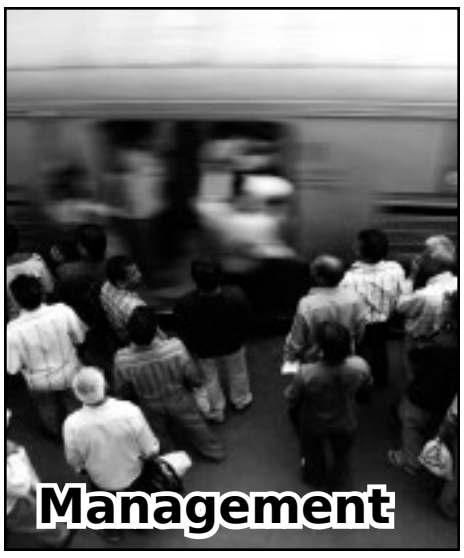
Engineering Programs at Waterloo



CHRISTY ROUAULT
GEOLOGICAL '15

Welcome to GeoEng! Geological engineering is a dual faculty program in the Faculty of Engineering and the Faculty of Earth and Atmospheric Science that can lead you to a wide variety of fields including geology, hydrogeology, hydrology, geotech, geophysics, geochem, geohazards, mining, oil and gas, and many more.

Whether you want to get to work via helicopter and get your hands dirty hiking in the mountains or you want to be a sophisticated engineer in a sky scraper in Toronto, this is the field for you. You are on your way to a career with many unique opportunities including hands-on field work, working abroad, and a high paying salary. Field trips across Ontario and an international trip to locations like Peru and Iceland are some of the highlights of your next five years.As a GeoEng in a tight-knit class you'll graduate with 20 best friends instead of 200 classmates. Nicknamed by Professor Unger as "engineering's best kept secret," we are a rare kind making us all the more valuable! Work hard, play hard, and get to know and love the people who will be your "rock" for the next five years.



PALLAVI HUKERIKAR
2A MANAGEMENT

Hello class of 2020 and welcome to Management Engineering. We're so glad that you have decided to join us.

Management Engineering is an extremely unique program that was designed to help students understand, design, implement, and manage complex systems upon which organizations rely. Management engineers combine their knowledge of mathematical modelling, information systems, and behavioural science to develop optimal solutions. You'll probably find yourself having to explain what Management Engineering is a lot of times throughout your time here, but don't worry, soon enough you'll develop an amazing explanation of your own.

Throughout the duration of the program you will learn about, and take electives in, three main themes: Operations Research and Supply Chain Management, Information Systems, and Management of Technology. Operations Research deals with quantitative models that are applied to coordinate activities in areas such as manufacturing, distribution, logistics, and supply chain management. Information Systems focuses on the creation and use of computer technology to support effective decision-making. Finally, the Management of Technology theme builds on the foundation of topics in finance, accounting, economics, and organizational behaviour while focusing on organizational issues related to managing technological change.

With such a diverse curriculum, it's no surprise that Management Engineers can be found practically anywhere. From finance to healthcare, or telecommunications to software, there is no industry that can't benefit from Management Engineering.

Thanks to the small class size and the fact that the program only has one stream, you'll easily be able to bond with your classmates over the next five years. Make sure to reach out to upper years if you ever need any help, and look out for MEET in your first and second term.

Welcome to the Management family! We wish you the best of luck in your first year!

LEILA MEEMA-COLEMAN
3T MECHANICAL

Congratulations 2019 Mechanicals on starting the five most exciting years of your life! So what can you expect in your first year? Well you will learn a little bit of everything. Mechanical is very general in first year, learning lots of physics, calculus, and materials, then specializing in upper years. First-year Mechanical Engineering will provide you with opportunities to learn about design principles, AutoCAD, and SolidWorks. You will meet your WEEF TAs who are fantastic upper years that are there to get to know you and help you succeed in your ME 100/101 course (best course ever by the way!). The other exciting part of your first year experience is coop! Mechanical is so diverse we have the opportunity to work in almost any engineering industry so whether its automotive, materials or building systems, you will have the chance to try it out first hand. Lastly, even though school and grades are important, first-year is about trying new things so get out there and join some clubs, student teams, WEEF, the Engineering Society or one of the other millions of opportunities Waterloo has! If you have any questions or need advice I am always around and happy to chat :)

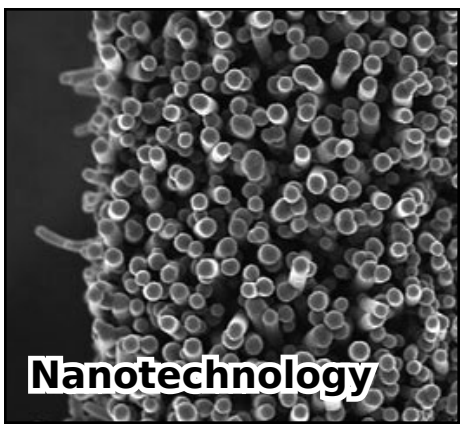
SAMI RAHMAN
4A MECHATRONICS

"You're in mechatronics engineering? Whoa, that sounds awesome, do you make like, Transformers?" That's how most of your first conversations might go with the friends you'll meet in first year. Feel free to confidently answer, "Probably."

Congratulations and welcome to one of Waterloo's standout multidisciplinary engineering programs, also known as Tron. Get ready to carve your undergrad legacy with an eclectic combination of electronics, mechanical engineering, controls, and computer science. You'll be challenged in each of these unique directions, making you an experienced, well-versed engineer and a valuable asset for cutting edge, high profile co-ops.

First year's going to fly by with a tonne of exciting hands-on projects that'll help solidify your interests. You'll program and assemble a robot, optimize a fuel cell car, build a truss bridge, tear apart an engine, and draft by hand and with software.

You're at the front of a roller coaster with way more ups than downs. Waterloo's mechatronics alumni are notorious for making waves internationally. I can't wait to see what you're going to accomplish, Class of 2020.



MEAGAN CARDNO
3B NANOTECHNOLOGY

Welcome to the family, newest generation of Nanos! I see you ogling the QNC as you shuffle around campus. I know, I know, it's beautiful, you lucky ducks. Back in my day, we had to wait fifteen years—uh, wait, maybe that's a story for another day.

You'll grow to hate every iteration of joke relating to Schrödinger's Cat and superposition, and might have the occasional nightmare regarding amino acids, but it'll be worth it for everything that you'll learn in the wonderfully diverse range of courses you can look forward to taking— organic chemistry, electromagnetism, semi-conductor physics, quantum mechanics, biochemistry, and calculus. Lots of calculus.

Like all programs and faculties, first term will be a rush of new experiences and challenges, but you, young nano, will be able to face and conquer them all with enough perseverance and smart thinking. Now's the time to figure out what balance of work, play, and sleep works best for you (try not to skimp out on that last one too much). A lot of the stuff you learn in first year will be the foundation of your upper year courses, so be sure to keep savvy, and remember: MATLAB is love, MATLAB is life.

Keep your eyes and ears open for details about the Nano Barbeque held every term, which will give you an opportunity to talk with other students and professors in the program. Talk to your Bigs and Huges, upper years, professors, and of course, classmates! It's a small world, after all.

JOSHUA KALPIN
4N SOFTWARE

Welcome to the land of Software Engineering 2020 Softies. You'll learn quickly that being called a Softie is actually an awesome thing, because we aren't soft at all. Software Engineering is a unique program in that you are fully in both the Math and Engineering faculties. This means you get to experience the best of both faculties !

In Software Engineering you'll learn everything about how computers and the software that runs on them works. This ranges from the design and implementation of complex software systems to the physics and circuits that explain how computers function.

Your first year will consist of a strong base of engineering and math fundamentals, and you may notice that you share a number of courses with other engineers and math students in other programs. As you progress through the program this will quickly change and you'll get to experience a slew of unique and interesting courses.

Software Engineering is a stream 8 program. This means you have the first eight months of your time at Waterloo to adjust to university life and the program itself before you embark on your first of many co-op terms. Don't worry about getting a job, JobMine, the school's job application service has a ton of jobs to apply to.

Lastly, don't be a stranger! Software Engineering resources are all on the second floor of the Davis Centre (DC), including the labs, lounge and administrative offices. Best of luck to you all. We're super excited you joining us and hope you have an amazing time here!

KEVIN LAU & CLASS
3A SYSTEMS DESIGN

One of the first things you'll memorize is the definition of Systems Design Engineering (SYDE), although in reality you'll spend the next five years defining what it means to you through electives and extracurricular activities. As the most interdisciplinary engineering program, you'll take courses from other engineering disciplines and unique design courses, culminating in unprecedented elective-flexibility in your upper years that will allow you to shape your degree.

Your home for the next five years will be the sixth floor of E5, where you'll have all of your core classes with your classmates, who will be some of the most well-rounded students from across Canada and beyond.

When it comes to co-op, the job opportunities available to us reflect the flexibility of our program. SYDE students have been hired for everything from software development to project management to working at hedge funds or oil refineries, in countries all over the world. Take advantage of your co-op terms to explore your interests.

Don't be afraid to ask the hard questions and actively seek answers. Always strive to make the most of your time here. SYDE will be challenging, but take some time to enjoy the journey. You're in for an awesome ride!

Welcome to the Family!

Sedra Student Design Center

Home of Some of the Best Innovation at the University of Waterloo

PETER TEERTSTRA
DIRECTOR, SEDRA STUDENT DESIGN CENTRE

The Sedra Student Design Center (SDC), located on the first and second floor of Engineering 5, is home to twenty-eight of the Faculty of Engineering's student competition teams. The largest facility of its kind in North America, the SDC provides work bays for teams as well as special purpose spaces for sanding, painting, engine testing, electronics assembly, and more.

Here are some typical questions that students have about student teams:

How do I join a student team?

Simple… email or walk into the team work bay and say "I want to join your team." Recruiting new members is one of their biggest challenges for a team—so they will be really happy to meet you!

Why should I join a team?

Being a member of a student team looks great on your resume; companies are always looking for students with practical, hands-on experience. Also, being on a team gives you lots of experiences you won't get in a class room. And it's fun!

Will I be able to handle the extra work load?

Absolutely! You can be an active member of a student team by participating as little as 1-2 hours per week.

The SDC is holding a Recruiting Open House on Tuesday, September 29 from 3:00 to 6:00 PM. Be sure to stop by to visit with the teams and get more information.

A view from the lower garage of the SDC, showing some of the teams working on their projects

Bridges to Prosperity

GRACE SUNG-JI LEE
BRIDGES TO PROSPERITY

Getting from point A to B is sometimes more difficult than taking the bus or walking across the street. There are communities in places like Bolivia who are often faced with geological obstacles like rivers. These boundaries block those in need from hospitals, schools, and markets, from getting where they need to go. UW B2P is working to change this! From fundraising to design and construction, we work alongside communities to build footbridges. During our trip, we teach the communities construction planning, techniques, and execution to provide know-how for future independent projects. The students part of our team create positive impacts and develop their technical, leadership, and teamwork skills by solving real-world problems. Our latest build was in August 2015, where our travel team built a footbridge with the community members of Chimore in Bolivia!

Building a footbridge from start to finish was not a small feat. We organized fundraisers and sponsorships, and planned a comprehensive design of the footbridge based on our earlier surveyed data. We also had to organize the materials needed overseas and deal with the challenges of working in a different country! Lastly, a carefully selected team traveled to build the footbridge with our community.

For more info, visit b2p.uwaterloo.ca, and if you wish to join our team, please send an outline of your specific interest in the team (e.g. fundraising) and how best to contact you to *b2p@uwaterloo.ca*

Formula Motorsports

AKMAL SYED
BUSINESS LEAD

Every year, the Formula Motorsports team designs, builds and races a formula-style race car across North America. Being one of the oldest teams at UW, we have been competing since 1987 in the Formula SAE student design competition. Most recently the team has placed 2nd in Autocross at Formula North in 2015, making our car the 2nd fastest car in Canada. We are currently preparing for an upcoming race in September at the University of Toronto Shootout.

As a member of the team, you can be involved in anything from machining parts that go on the car, to designing mechanisms for sub systems, or even driving the car! Of course, it also looks great on a resume. The experience you gain here is something you will never learn in class, but the most important things to take away from Formula Motorsports are the passion, drive and focus that govern the team's campaign every year. The team is looking for first years interested in taking on the challenge of Formula Motorsports.

Team meetings are on Monday's at 7 PM in E5-2004. Show up and ask questions! You can also email us at *uwfsae@gmail.com*

iGEM Team

JAMES HAWLEY
IGEM DIRECTOR

The Waterloo iGEM (International Genetically Engineered Machine) Team is an undergraduate research and design team focused on synthetic biology and genetic engineering. Every year the team develops new solutions for tackling current problems in or related to the field, and we compete in the iGEM Competition. Our team spans all six faculties, and we give undergraduate students the opportunity to explore and contribute to a growing research field through experiential learning and personal training.

This past year our team used the CRISPR-Cas9 system and attempted to improve its function as a genome editing tool. By modifying how CRISPR binds to and recognizes DNA, we designed it to target a wider proportion of the genome, and to decrease turnaround time for targeting different sequences in the lab. In addition, we attempted to use CRISPR as a viral defense mechanism in plants for the first time, to add a new mechanism to plants' native immune systems.

Our team is passionate about science, math, and engineering, and we're looking for smart and enthusiastic people to join our team.

Engineers Without Borders

ALEX VASILE
ENGINEERS WITHOUT BORDERS

Here at Engineers Without Borders, we're all about creating sustainable change to the systems that cause and perpetuate poverty. A lot of people think that means sending people overseas to directly perform engineering work, such as digging wells or building bridges. Well, believe us when we say that doesn't work on its own, at least not in terms of sustainability. Instead, we focus on working with local communities and ventures in the areas of the world that we want to help. We provide them with support and guidance, helping them solve problems while they remain fully independent. At the same time, we also do a lot of work here in Waterloo. We, with the help of other on campus groups, have been pushing to get more Fairtrade certified goods on campus. Of course, it's not all hard work and no play. We participate in the yearly Run to End Poverty, host our Gala night, and much more. For more information, and if you have any questions, come out to our first general meetings of the term on September 22nd and 24th; be on the lookout for more information as we get closer to these dates.

UW Eco-Marathon Team

SHERWIN KWAN
MECHANICAL '15

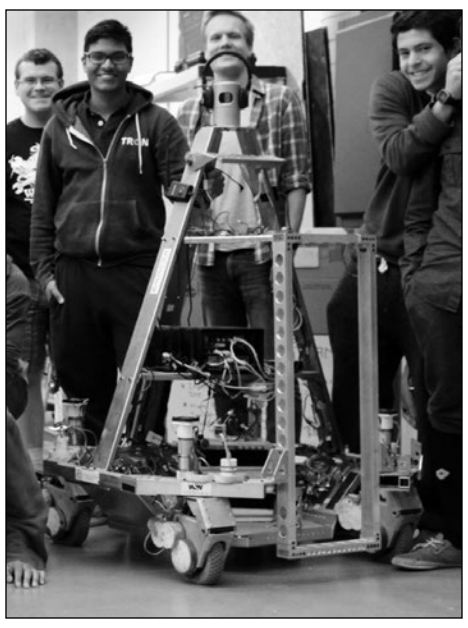
The University of Waterloo Eco-Marathon Team (UWEMT) designs and builds high-efficiency cars. We currently have a battery-electric vehicle with a sleek new carbon-fibre monocoque design, and are also building an engine for a gasoline-powered car. We compete in the Shell Eco-Marathon every year in Detroit.

Our cars are prototypes that only need to seat the driver, so extremely aerodynamic shapes and spectacular efficiencies are possible. Our electric car is capable of going 200 km on a kWh of charge, and once our gasoline car is complete, it will be capable of 0.2 L per 100 km.

We believe in getting everyone involved! Projects which we will be working on this term include building a motor controller for our electric car, designing windows, and constructing a steering system. We meet once a week to discuss and work on our cars. Come join us, and we'll give you something to do.

Even if you're not an engineering student, we also recruit from other faculties for our business sub-team, which connects us with sponsors.

Want to join? You can find our design bay on the second floor of E5. For more information, you can find us on Facebook at *www.facebook.com/UWEcoMarathon*, or watch videos of our cars being built at *www.youtube.com/user/uwecomarathon*.



UW Robotics

AYODEJI IGE
UW ROBOTICS

A few weeks ago we had to take on the very difficult task of cleaning up the UW Robotics lab. During the clean up, we came across a lot of old projects that past members of the team had worked on. It was interesting to see components and technology that we had worked with and some that we did not recognize. The projects reminded us of how fast technology changes because every day, people decide to take on the challenge of solving problems. This really is what the culture of UW Robotics and uwaterloo engineering is about. The UW Robotics Team was founded in summer of 2003 by enterprising engineering students who decided that they wanted to combine passion and skill to build cool things. This mindset has taken the team from working in the WEEF lab during lunch to having a full size lab in E5, but there's more to that story.

Over the years we have partaken in many competitions and have done a series of outreach events, and we've done really well in most of them. We currently have three main competitions we are involved in. One competition requires us to build a rover that should transverse a terrain similar to Mars and perform tasks that require precision, like soil sample analysis and astronaut assistance. Another one requires us to build a small autonomous race car that combines the use of cameras and a Lidar sensor to compete with other cars in circuit and drag races. The last competition involves building a fully autonomous vehicle that uses path planning algorithms and computer vision optimizations to find an object in a complex maze with obstacles.

The team is growing and will be doing a lot more cool things in the future. We've had members who have gone on to work at great companies or even start their own because of their experience on the team. Getting involved with our team or any other student design team is a great way to meet awesome people, gain practical experience, and solve real problems!

Waterloo Rocketry Team

ROBIN LIU
WATERLOO ROCKETRY TEAM,
ADMINISTRATIVE LEAD

If you are interested in rocketry, our team is the place to be. Here, you'll find equally driven and passionate team members who share that love for rockets.

The Waterloo Rocketry Team is composed of multidisciplinary undergraduate members who have a passion for rocket engineering in a competitive hands-on environment. Each June, we compete against over 30 international teams in the Intercollegiate Rocket Engineering Competition, the largest rocket competition for undergraduate students in the world. The goal of the competition is simple; launch a rocket to an altitude target of 10,000 or 23,000 feet and recover it safely. Despite this simple goal, you'll soon find that it's not so easy in practice. This is literally rocket science! Mishaps and catastrophic failures are not uncommon; our most recent rocket, Vidar MK II, won Best Explosion at the competition!

In our team you can gain knowledge and experience in almost every aspect of engineering. You will learn things that would otherwise never be taught to you in the classroom. Come by our bay (E5-1008) or find us at *www.waterloorocketry.com* to learn more.

WARG Team

ERIC FIELD
WARG TEAM LEAD

The Waterloo Aerial Robotics Group (WARG) is a team of students whose mission is to design and build autonomous aircraft with surveillance capabilities for the Unmanned Systems Canada Competition. The competition entails locating the position and/or volume of ground targets with accuracy. Thus, our aircraft must be capable of tasks such as flight stabilization, navigation, and visual recognition, amongst others.

There are a wide range of tasks the team completes, appealing to all branches of engineering, computer science, and other fields. There are mechanical opportunities such as wing and camera gimbal design; software opportunities include image processing and flight control software; electrical opportunities such as autopilot board design; and business opportunities are wide with opportunities in media, sponsorships, and finance.

So if designing autonomous aircraft interests you, check out our website *ece.uwaterloo.ca/~war* and find us on Facebook for more information about joining the team.

Other Design Teams in the SDC

Alternate Fuels Team
Aquaponics Team
Baja Team
Concrete Toboggan & Concrete Canoe Team
Designed Nanoscale Assembly
Electric Motorsports Team
Midnight Sun Solar Car Team
Steel Bridge Team
University of Waterloo Clean Snowmobile Team
Waterloo Satellite Team (WatSAT)
Waterloo Institute of Industrial Engineers Chapter
Waterloo Hybrid
Waterloo Submarine Racing Team

Engineering Exchanges

Where the world becomes your classroom!

PROF. RICHARD CULHAM, CINDY HOWE
ASSOCIATE DEAN, INTERNATIONAL; ADMINISTRATIVE COORDINATOR, ENGINEERING EXCHANGES

Welcome, class of 2020, to Waterloo Engineering!

The engineer of the future will need to be a truly global engineer, where geographical boundaries will be of relatively minor importance while communicating and working with engineers of all nationalities will be essential. An international exchange could be your first step along this path!

What is an International Exchange?

An international exchange is a program that allows students to spend one or two academic terms at one of our partner universities while earning credits toward their Waterloo degree.

International Exchange is available to all undergraduate students that maintain an overall grade point average of 70% or higher and typically takes place in your 3A or 3B academic terms (or both!!). Normally, you will lose no time on exchange and will graduate with your class.

Why Should You Start Thinking About it in 1A?

It's a great opportunity that should be high on your list of things to plan for, but it needs preparation, organization, and forethought. You could be among the 15% of your class who goes on this amazing adventure and learning experience.

What Are Some Benefits of Exchange?

If you've lived most of your life in one country in one culture, exchange will truly be an eye-opening and life-changing experience for you. It can open your eyes to the outlook, traditions and culture of your host country. You'll meet other exchange students from all over the world and make life-long friends and contacts.

The Faculty of Engineering has exchange partnerships with over 80 top-tier universities in about 30 countries. You'll need to decide which best suits your needs: most of our exchanges are restricted in numbers, some are open only to certain disciplines of engineering, and for some you need to learn (or refresh) your language skills if the language of instruction is not English. In some of our exchanges it's easiest to go for a one-term exchange, while for others two terms, or even a full year including a work term may provide a better fit.

All this is a part of planning for your future which could take you anywhere in the world!

To get started, visit our website (search for "Engineering Exchanges" at the UW home page) for all information, instructions, and forms you'll need. If you are on Facebook, look for the "UW Engineering Exchanges" group, which is specifically for outbound students and for those who have been on exchange, and is moderated by the Engineering Society (EngSoc) and the Faculty Exchange Office.

Also be sure to contact Cindy Howe in the Faculty Exchange Office (Carl Pollock Hall, Room 3658), eng.ug.exchange.askus@uwaterloo.ca

Don't let this chance pass you by! You will need more than a year of lead-time after completing the application process before you can go on exchange.

What about tuition fees?

You will pay your regular Waterloo tuition fees to Waterloo.

Finally, an exchange is great for fun, travel and adventure. You'll visit parts of the world that stay-at-home students may never experience. Don't take our word for it; talk to students who've gone, or read what they have to say:

"Going on exchange is the BEST decision I've made in my undergrad life! It has helped me grow as a person from learning in a new environment, making friends around the world, and seeing things in different perspectives. Not to mention all the amazing travels you can do on an exchange." - LinLin Chen, Management Engineering

"In my opinion no classroom is ever an ample substitute for the experiences of the real world and nothing provides the individual more perspective than the opportunity to travel abroad. As our global world seeks to address the pressing challenges of our age, such perspective is becoming invaluable." - Matthew Benson, Civil Engineering

[writing of a camping experience while on exchange in Chile] *"A little village of tents beneath the mountains. I'd never gone hiking in such a busy place, but I loved the suppertime gatherings around propane stoves, passing spices round to other travelers, trading stories."* - Tessa Alexanian, Systems Design Engineering

The History of Orientation Week at Waterloo

ROSS RICUPERO
CIVIL '09

The oldest recorded discussion of Orientation Week at the University of Waterloo is from the October 13, 1961 edition of The Coryphaeus, the University of Waterloo's first student newspaper. It's a simple article that welcomes freshman engineers to the school and the Engineering Society. It also gives thanks to Dave Smith, chairman of the Initiation Committee (Orientation used to be called initiation) and announces the Initiation Dance as part of WA-WA-WEE '61 (The old name of Warrior Weekends, an event that ran up to 2011).

The September 27, 1963 edition of The Coryphaeus gives even more details on "initiation" with an article discussing the school-wide scavenger hunt (apparently they acquired things like wagons, tractors, hay bales, snow fences and pictures of someone named Brigitte Bardot), a game to measure the length of a city block with hotdogs, a challenge to make a line of pennies stretching from Kitchener City Hall to Waterloo City Hall (which is apparently approximately 140,000 pennies), the (seemingly) annual 'Froshman Hop' dance, and some unknown event called the 'Hootenanny'. Each faculty organized their own Initiation program and worked with the Orientation Committee, which ensured the individual programs worked across the school.

In '64, '65, and '66 even more traditions had started to form. First year students from Arts, Science, and Engineering (the only faculties at UW at the time) were all awarded 'beanies' or caps at the beginning of (the now called) Orientation and the cheer of "I'm a dirty rotten dead horse and I stink!" was used throughout the week, accompanied by students falling to the ground, laying on their back and sticking their arms and legs in the air. The Frosh Queen competition, in which 'Freshettes', or female first-year students, competed to be elected to the position complete with sash and crown, became a major event. The penny-drive also became Slave Day, where first-year students would be sold to members of the community to help them with whatever they choose, or for charity purposes.

In 1967, Stewart Saxe, a political science student and head of the Orientation Committee, re-imagined the entire week and introduced the big-brother concept. All first year students (there were only 2,200 in 1967, a third of the 6,000+ we expect this year) were divided into groups of ten which were overseen by Archons, a single upper-year student leader, which stayed with the group the entire week. This year continued the method of each society running their initiation programs, and the Orientation Committee overseeing the entire thing.

1967 was also the first year that an aerial photo from Orientation Week was published. The 360 strong group spelled "Hagey" across the Arts quad to salute then-president J. G. Hagey (the same Hagey that Hagey Hall is named after).

It was during the late 1960s that the bulk of Orientation Week was moved to the control of the Federation of Students (FEDS). While the student societies still planned and ran programming for their specific faculty, many of the larger events would be planned by FEDS. It's from this point throughout the 1970s that FEDS took the Orientation Week of the 1960s and made it into a month long Orientation program with varied social or educational events each day from the start of September to the end. This included many high-profile concerts such as Meatloaf, Gordon Lightfoot, and Ike and Tina Turner, as well as speeches from major political figures, cabinet ministers, MPPs, and radical leaders.

While the much expanded programming offered more choices for incoming students, it was during this time that student apathy and low attendance began to take its toll. Concerts lost money (the Ike and Tina Turner concert lost $6,000 in 1972, which is over $30,000 today accounting for inflation), speeches went unattended, and acts cancelled or simply didn't show. Reviews of the Orientation program varied wildly from condemnation to enthusiastic.

It was during this time that the Engineering Orientation program moved away from the Slave Day charity and began running the Bus Push charity (which has continued annually since then in the Winter term). 1969 also saw the Engineering Stag event of Orientation Week, which was little more than a drunken strip-tease for first-year students.

It wasn't until 1978, when the LLBO took dispute with the University's 'beer tents' that programming needed to be reduced and concerts rethought. The LLBO refused to license the outdoor tents that were part of Orientation Week in years past, reducing the amount of money that the Orientation program had to use, preventing headline concert acts and major guests.

Then began the dark years (or the years where written records become spotty). It's expected that Orientation Week continued this way for the 1980s and early 1990s. Student societies continued running programming for their faculties, and the Federation of Students continued running the overall program. It was during an unknown Orientation Week during the 1980s that the Education Committee was founded, and that the engineering hardhats became a major symbol. These have stayed as key components of Engineering Orientation Week since then. The oldest record of the Education Committee is an Orientation Week video from 1988 and hardhats could be over a decade older than that.

At the end of the dark years, Engineering

Orientation Week was a tight, multi-day program packed with events. Incoming students would go through a program similar to the program we have now, but that had very distinct differences. In 1993 a UW Orientation Manual was produced and distributed to the groups running the faculty programming and soon after a major part of Orientation Week today was founded; the Federation Orientation Committee (FOC). The goal with FOC was to have better collaboration between the independent groups running various Orientation Week programming and the Federation of Students, allowing a more efficient Orientation Week overall. This started the process of Orientation Week becoming more regulated and controlled, something that would take the unorganized month-long Orientation programs of the late '70s and '80s, to the smaller, week-long programs of the '90s. By 1996, a schedule that resembles the modern day Engineering Orientation Week began to emerge: Aerial photos were taken (these can all be seen in the POETS lounge), they earned their hardhats, and they all met the Dean. However, they also competed in chariot races, paraded through town, and had organized off-campus parties—events long since banned or modified.

It was during 1997 and 1998 that a new program started to address major concerns highlighted in an Orientation Student Survey conducted in 1994 and 1995. This survey concluded that there was a dangerous undercurrent of behavior across all Orientation programs. From discriminatory chanting to exclusive programming and a dependence on drinking, it was seen that there was a fundamental problem with Orientation Week; the leaders themselves. There was no formalized Orientation Leader training program for leaders to go through, and there were few checks and balances on the actions of these leaders too. People simply ran Orientation Week like it had been run for the year they went through it and every year before that.

It was because of this that the Provost's Advisory Committee on Orientation (PACO) was founded, and PACO training was implemented in 1998. This training, mandatory for all Orientation leaders, covered things like drinking and drugs, inclusivity, and non-discrimination. While some students cried out that this was gutting the Orientation Week they knew and loved, it ultimately led to the modern Orientation Week we have now, which many believe to be better than ever before.

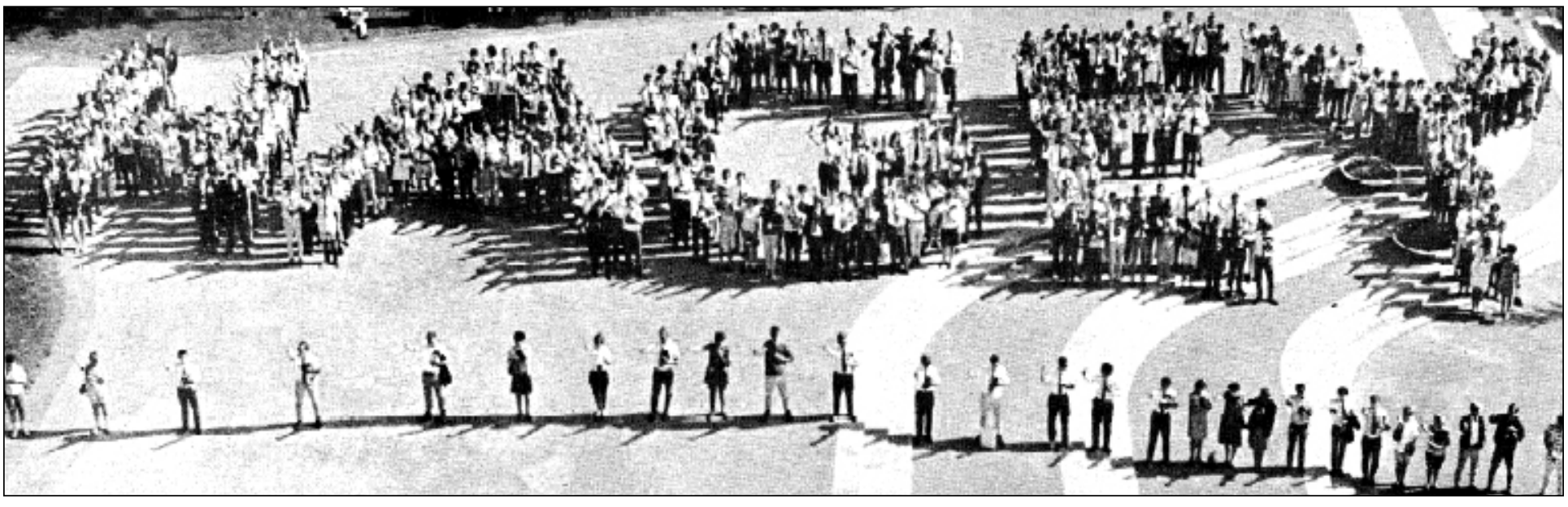
With the double cohort of 2003, a large percentage of students were now entering university at age 18; younger than the legal drinking age. This became a problem as many planned events during Orientation Week were 'wet' events where alcohol was served. A controlled environment was implemented, with 'beer gardens' allowed at certain events and each organizing group allowed to have a single 'wet' event for their faculty or residence.

By 2004, PACO was dissolved and we were left with Orientation Leader Training, the modern version of PACO leader training. 2004 was also the last year that Orientation Week officially included alcohol with a beer garden at the Saturday night Toga party. Once Orientation Week 2004 closed, alcohol wouldn't be part of the week again.

In 2015, Orientation Week is over 50 years old, involves over 8,000 first-year students, 1,000 upper year students, has a budget in the hundreds of thousands, and the support of countless sponsors and contributors. While it may be completely different from the Initiation of 1961, Orientation Week 2014 has built upon the past decades; all of the conflicts and problems, changes, successes, and failures have been rolled into the week.

While it may not be perfect, it is a continuation of a tradition started soon after the University of Waterloo was founded, and it represents the unconventional history and future of this school.

(Editor's note: Some minor modifications made to the original article by Ross to keep the article current.)



Welcome to First Year Engineering

Greeting from the First Year Office

AJOY OPAL
DIRECTOR, FIRST YEAR ENGINEERING

A warm welcome to all first year engineering students and congratulations on joining one of the finest universities in Canada. Starting university will provide many opportunities for personal and academic growth: to make new friends, to visit new places, to develop critical analysis skills, to gain valuable work experience, and to develop a career of your choice. Your undergraduate degree will take approximately five years to complete and it is important that you start this process with care and planning. The First Year Engineering Office is here to help you plan and manage the transition from high school and home to a new environment in the university.

Starting university is also synonymous with becoming an adult. You have the freedom to do what you like and also the responsibility of taking care of yourself. It is your choice to attend classes, complete assignments or write exams; however, we highly recommend that you participate in all of these activities, as they will benefit you greatly. The decisions that you make now will have far reaching consequences later in your life. So, choose wisely! Let me give you some tips on what to expect and on how to succeed in engineering at Waterloo.

What to Expect in Your 1A Term

Each one of you will have approximately 30 hours per week of scheduled lectures, tutorials, and laboratory periods during the 1A term. In addition, you will have to put in 20-30 hours per week to study, review concepts, and to finish assignments and reports. This adds up to 50-60 hours per week of work; it is more than a full time job! To manage this workload, you may have to change your study habits and how you manage your life. Let me give you some tips on things that work, and some things that do not work:

• Attend classes. Follow along with what the instructor is teaching in class. Ask questions. During classes do not be distracted by Facebook, Twitter, movies, or games on your computer or smartphone.

• Review your course material and complete assignments on a regular weekly basis. Do not try to cram the day before exams.

• Understand the underlying concepts that you are studying in class, instead of memorizing formulae. Solve problems to evaluate your understanding of concepts.

Balance your Life

Your first thought when you join university may be at either end of two extremes: either study-study-study, or—possibly—party-party-party. Neither of these extremes is the ideal choice and, as usual, the best choice lies somewhere in between. Let me suggest that everyone is made up of three major parts: mind, body and soul. To be successful in life you need to nurture all of these parts because they depend on each other for survival. For your mind you need to spend time studying and developing critical analysis skills; for your body you need to eat, sleep, and exercise regularly; and for your soul you need to relax with friends or take part in extracurricular activities. Not only do you have to nurture all three parts, you need to balance the amount of time spent on each activity, without ignoring any aspect of your life.

You will also find that time will become an important resource that is in short supply during your undergraduate career. There will never be enough time to complete all the tasks to the degree of satisfaction that you would like. Thus, you will have to set priorities and spend an appropriate amount of time on each task. To help you with this process it is important that you make a schedule for all your activities. Not only should you make a schedule, you must follow it and make adjustments to it as you go along. In summary, there are three major things to consider during your undergraduate studies. They are neither study-study-study, nor party-party-party. Instead, they are mind-body-soul, and the balance between them.

Ask for Help

All engineering programs are demanding and have heavy workloads. The workload may result in limited time to understand a concept, finish an assignment or project, or prepare for an exam. The lack of time may also cause stress in your life. In these situations you will need help with your studies or personal life. Keep in mind that asking for help maybe the better choice in many situations, as opposed to doing everything yourself or doing nothing.

There are many sources of academic help available at the university. First will be your classmates and friends studying the same or similar subjects. It will be beneficial to form study groups with other students taking the same course. Help is also available from your course instructors and teaching assistants during lectures and tutorials, and outside class hours by making appointments to see them in their office. Additional help is available through special staff and tutors hired by the First Year Engineering Office to help you with your courses. The First Year Engineering advisors are available to provide academic counselling, for example, in case your academic performance is not meeting the standards we expect of all students. Please make use of all these resources.

To get help with stress and personal issues, and to learn study and time management skills you can come to Counselling Services. There are Engineering Counsellors available within the First Year Office, or you can go to Needles Hall for additional university Counselling Services. For your physical health you have access to doctors and nurses on campus at Health Services.

Information and access to all of these kinds of help can be obtained by coming to the First Year Office in CPH 1320, or by calling extension 84761 during normal working hours.

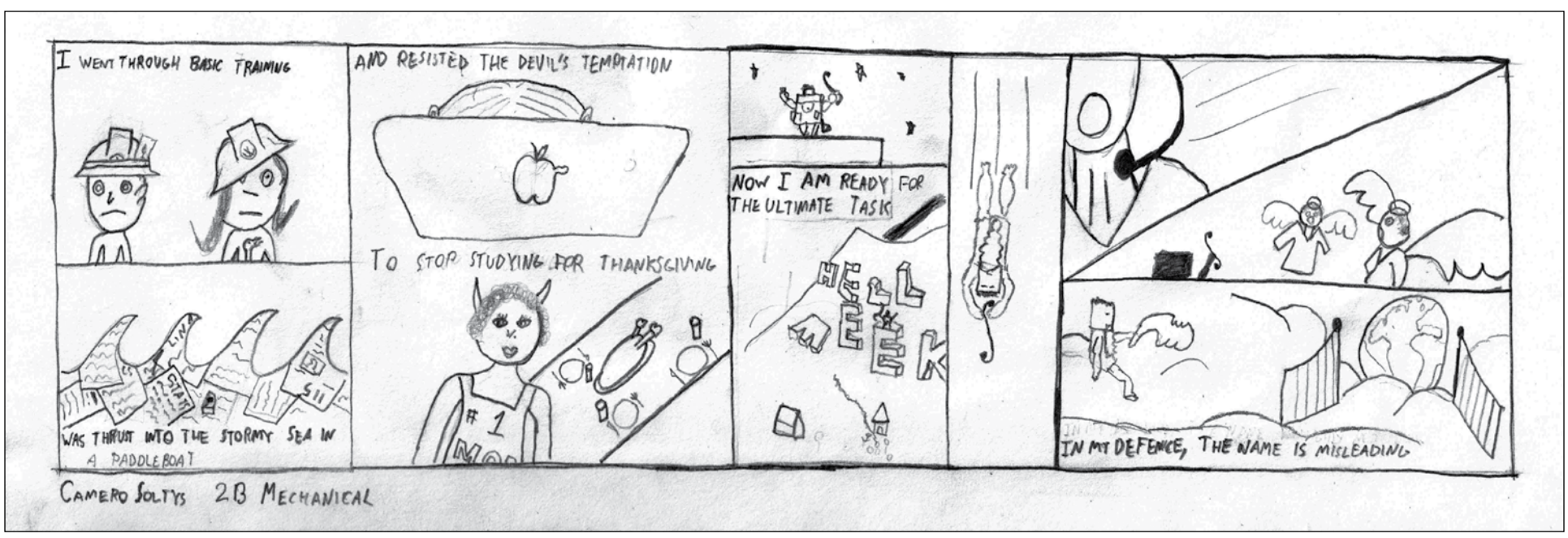
Be Professional

Engineering, like many other programs—such as, medicine, law, and accounting—are called professional programs. The reason is that the work done by these professionals can, and does, affect the lives of other people. As a result, professionals are expected to adhere to high standards in their dealings with other people and amongst themselves. To help you develop as a professional, we expect you to behave in a professional way with everyone, including your fellow students, teaching assistants, instructors, and university staff. Any unprofessional behaviour during your university career can have serious consequences and, depending upon the seriousness of the misdeed, these can range from to loss of marks in a course all the way to expulsion from the university.

Being a professional means being ethical, courteous, and considerate in all your dealings, and communicating your ideas and thoughts clearly. Being professional in a classroom will mean not disturbing your fellow students or the instructor by talking in class. Being professional to your fellow students will mean treating everybody equally and without prejudice, regardless of their race, colour, creed, sex or religion. Being a professional means not to lie, cheat, or copy on assignments and exams. Being professional means giving credit where it is due, without misrepresenting somebody else's work as your own. Being a professional is all about doing the right thing at the right time. If you are ever in doubt about if an action is professional or not, ask someone in a position of authority to help you decide.

I wish you all a successful career in engineering and a enjoyable time at the University of Waterloo.

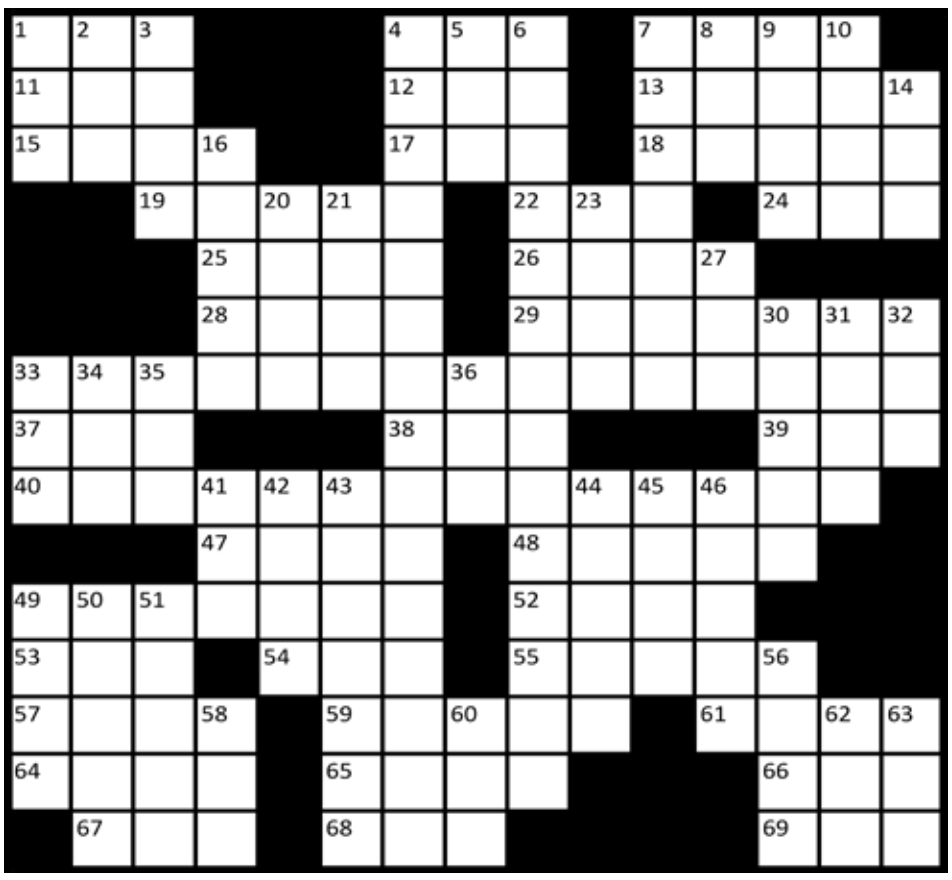
Something To Look Forward To



The Iron Crossword

It's Time to Party

CAMERON SOLTYS
2T MECHANICAL



Across

1: North pole resident that helps Santa
4: Frequently
7: A committee that doesn't exist (abbr)
11: Ancient blowing horn
12: Building that infamously has poor cell service (abbr)
13: A type of lake that forms when a river changes course
15: Capital city of Ukraine
17: A material that is easily transversed with metal shoes
18: Offshoots of more popular religions
19: Make fun of
22: A small child
24: The home of bears and foxes
25: Unreactive gas loved by The Strip
26: Food recycling program in Woodbridge, Ontario (abbr)
28: For quadrupeds, a movement in which each diagonal pair of legs lift alternately
29: Old-fashioned name for optometrist
33: ___ ___'s Christmas Vacation (2 wd)
37: Biblical priest who blessed Hannah, mother of Samuel
38: A container one might bathe in, perhaps
39: The thread standard of US fire hoses (abbr)
40: Sirius XM, for instance
47: Prefix relating to gods and religion
48: The main artery of the body
49: Restore to a different position or state
52: An annoying feature that can occur on roads made of 67 Across
53: Organization designed to foster European defence cooperation (abbr)
54: A basic landscaping job often performed by students as a summer job
55: A type of document you may only need to create once in the Faculty of Engineering
57: Old-time video storage devices
59: Fundamental distance unit of the International System of Units
61: Seven occur per week
64: Used in cleaning
65: Slimy snake-like fish
66: A grassland or pasture
67: Fills a pit that Bigs will help you cross
68: Indicating that a patient does not suffer a hypersensitivity of the immune system (abbr)
69: Established (abbr)

Down

1: A deer of North America and eastern Asia
2: French word from "him"
3: Worry, especially as a mother
4: The most awesome week you will ever have as a Waterloo engineering student
5: Federal Agency that regulates interstate communications
6: Esteemed group that keeps our precious mascot safe (3 wd)
7: A homeopathic cure, for instance
8: Extension of a file you should not open willy-nilly from emails
9: Alpha Beta...
10: British charity that works to help orphans in Eastern Europe and Asia (abbr)
14: Disease that is wreaking havoc in local bat populations (abbr)
16: The Starbucks coffee size you will need per hour by the end of the term
20: A chocolate, or a deadly weapon
21: Not long now
23: A species of dolphin easily identified by the white spots behind its eyes
27: A quality for 57 across that triples video time with a sever loss of quality (abbr)
30: In League of Legends, the island from which Soraka comes
31: In between happy and sad (2 wd)
32: "I'm ____, I'm dynamite"
33: Game system of Super Mario Bros.
34: ____ ____ carte (2 wd)
35: A name for chickadees outside of North America
36: An array of information that is used in leiu of complex operations (abbr)
41: A tool that moves data from one database to another (abbr)
42: A Christian ministry in New York State that does work in Congo
43: Emmett Brickowoski, for instance
44: Awaken
45: The faculty of the lion statue
46: An uncommon chat abbreviation indicating someone is interested in moping around
49: ___ the engine to show he was ready to go.
50: The most rocking group on campus
51: Capital of the Swiss canton of Aargau
56: One of the many less-prestigious-than-Waterloo universities
58: German political party currently in coalition with the CDU/CSU
60: Nickelodeon TV show and the unfortunate status of the main character (abbr)
62: Can you make it through this semester?
63: Upon a chair, perhaps

Sudoku

#2015-FR

CAMERON SOLTYS
2T MECHANICAL

Easy

4	8						1	2
		2		8	6			5
				9			7	6
7		3	8	5				
				1	7	2		9
1	4			6				
2			5	4		6		
6	5						8	1

Medium

		8		7	4			
4			3				8	
	2							7
		1			7			5
5	7	4	9	2	3	1	6	8
6			1			7		
1							4	
	3				6			1
			2	1		5		

Hard

					6			4
				1		7		
		7	4			9	5	6
		5	2	8			6	
7			5		9			1
	8			6	7	5		
9	3	6			2	4		
		8		9				
2			6					

Solutions for previous crosswords can be found on *The Iron Warrior*'s website at *iwarrior.uwaterloo.ca/distractions*.

THE IRON INQUISITION

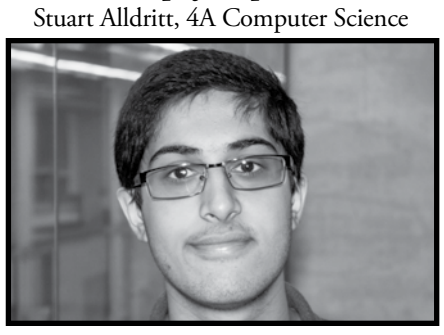
Cameron Soltys, 2T Mechanical

"What Was Your Favourite Part of Orientation Week?"

"Variety night—there was a manhunt game, and not only was it fun but it taught me the map of campus."
Stuart Alldritt, 4A Computer Science

"Junkyard Wars!"
Hannah Yu, 2A Civil

"How about when we received the hardhats? I thought that was awesome. It's still up on my wall."
Joseph Perez, 2B Mechanical



"Monte Carlo"
Shalin Upadhyay, 1T Computer Science

"Monte Carlo[...] You would know a decent amount of friends and it was a good place to hang out."
David Stephens, 3A Physics and Astronomy

"Junkyard Wars"
Archie Lee, 1T Mechatronics