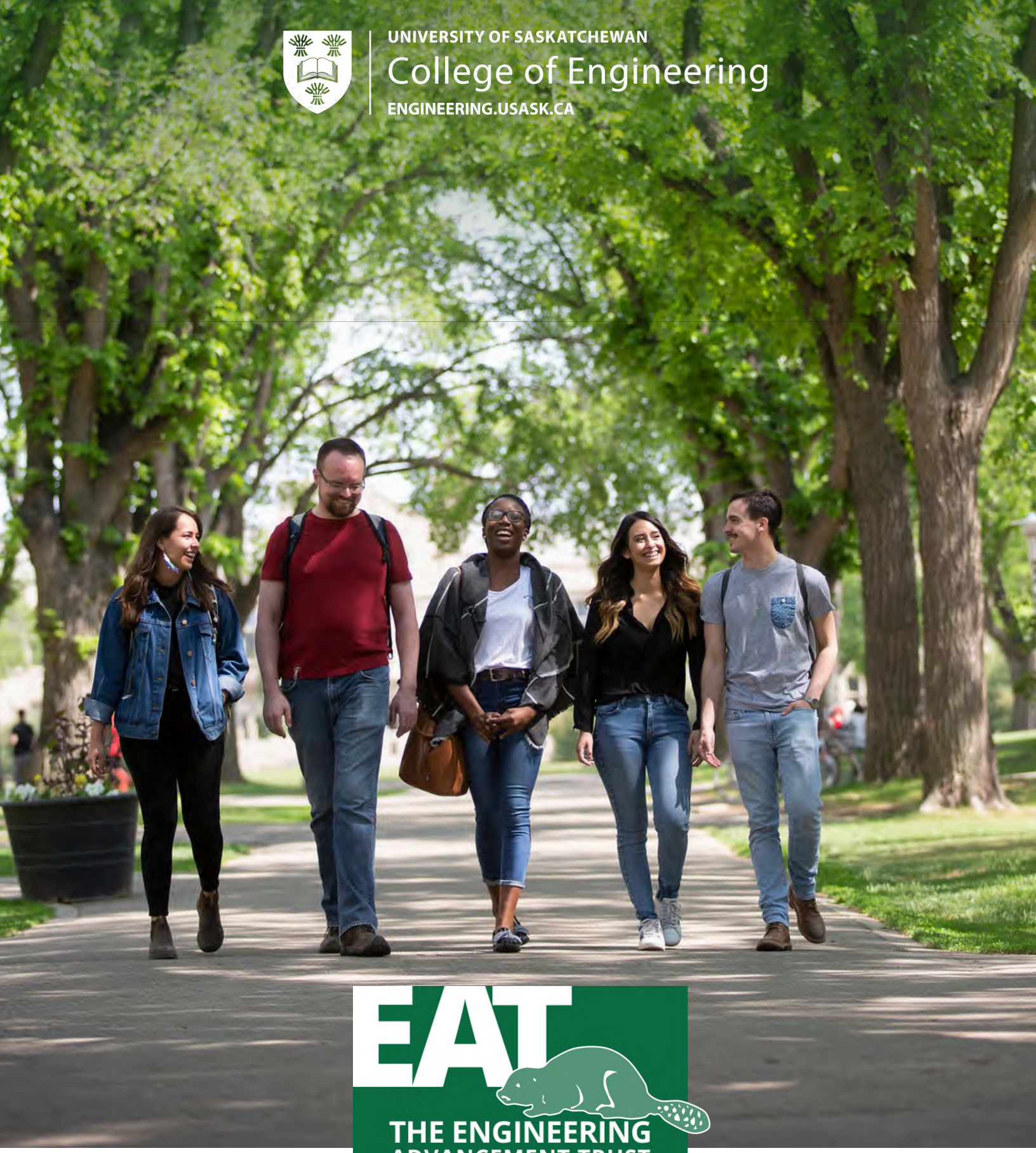
UNIVERSITY OF SASKATCHEWAN
College of Engineering
ENGINEERING.USASK.CA



EAT
THE ENGINEERING ADVANCEMENT TRUST
COLLEGE OF ENGINEERING | USASK

DONOR REPORT 2020-2021

ENGINEERS OUR WORLD NEEDS

BE WHAT THE WORLD NEEDS

You continue an important legacy in USask Engineering: the tradition of proud USask engineers who transition from grateful graduates to generous alumni.

As local and global challenges mount, you give our aspiring students the tools, experiences and opportunities to become engineers our world needs.

THANK YOU

Thank you for making a difference

Your generosity gives the next generation of students the best opportunities to become exceptional engineers.

This year, we invited the Class of 2021 to join our alumni by asking them as they graduate – who would you like to be? Like us, they can be proud, thorough, giving alumni and engineers our world needs.

You are a role model for students and young alumni who aspire to follow in your footsteps. I hope you enjoy reading about the many examples of the positive impact your gift is having.

Thank you for being with us and my added gratitude to the alumni volunteers and college leadership for your partnership.

Myron M Stadnyk

Myron Stadnyk, BE 1985
Engineering Advancement Trust Chair

Your support of the Engineering Advancement Trust builds the future for our college and for a new generation of students. Thank you.

Because of your generosity, students have the tools they need to test, practice and explore in a safe environment. These experiences prepare them to enter industry equipped with practical skills and a sense of what works.

As students return to campus this fall, your support ushers them into new experiences that add tremendous value to their development.

For decades, our alumni have carried on a tradition of uplifting the generation following them. Your generosity continues this proud legacy.

Thank you for helping to ensure their success and the continued strength of the profession.

Dr. Suzanne Kresta, PhD, P.Eng., FEC
Dean, College of Engineering

EAT BY THE NUMBERS

$166,517.11
Raised in 2020-2021

203 Donors

248 Gifts

6% Organizations

94% Individuals

99% USask Alum

1% Professors emeriti

WHERE OUR DONORS CALL HOME

Alberta	**60%**	**Sask**	**21%**
Ontario	**6%**	**BC**	**5%**
USA	**4%**	**Manitoba**	**2%**
Other	**2%**		

YOU IMPACT OUR LABS

EQUIPPING LABS FOR THE RE-ENGINEERED FIRST-YEAR PROGRAM

The Engineering Advancement Trust allocated $370,000 in funding to support the final stages of a new experience in first-year engineering: our new program that is dubbed RE-ENGINEERED. This funding will introduce new labs across the first-year experience to provide a deeper exposure to the disciplines through added hands-on learning opportunities.

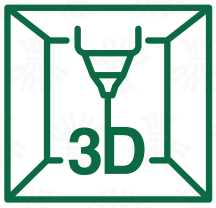
DISCIPLINARY LAB EXPERIENCES (GE 112) AND DESIGN II (GE 143)

Disciplinary Lab Experiences show off each engineering discipline by providing a fun and engaging hands-on lab experience over the course of a day. Each of these labs will build on what the students know by the end of first term and engage them in each discipline. Thanks to gifts from the Engineering Advancement Trust, we are introducing several enhancements.

DISCIPLINE	EQUIPMENT	DESCRIPTION	AMOUNT
Chemical & Biological Engineering	Mettler Toledo™ Handheld Density Meter Densito	To conduct liquid-liquid extraction at small scale. Liquid-liquid extraction process is a key unit operation in many chemical processes. This item will help a large number of students conduct experiments and analyze data. Multiple analytical instruments will be needed in order to have multiple small groups, which enhances the learning experience. Students will have a chance to observe the operation at a pilot-scale liquid-liquid extraction unit. The key learning outcome is to get an understanding of how bench-scale process is scaled-up to a larger continuous operation.	$30,000
	Laboratory Flotation Machine 911MPE-D12-A	To conduct potash flotation at a small scale. Saskatchewan is one of the largest producers of potash in the world. Providing students with an opportunity to understand how chemistry, physics, math, and engineering come together in this process will be a great learning opportunity that they can put in the context of their previously gained knowledge. The topic will also make them aware of the natural resources in the province. Students will observe the process at laboratory and pilot scales.	
Electrical & Computer Engineering	Texas Instruments Robotics System Learning Kit	We plan a robotics lab exercise for both EE and CME students. We can accommodate up to 40 pairs of students for each program at the same time using a robotic design exercise that controls a robot using Bluetooth, among other applications.	$22,000
Civil, Geological & Environmental Engineering	PASCO Bridge Sets	The Bridge Set is a set of structural elements and connectors that can be used to build truss bridges. Students will work in groups of four to experiment with building different types of truss bridges, first to understand how the structural systems work and then to try to produce the most efficient/strongest bridge. We already have a sufficient number of load cell sets to allow students to measure the tension and compression forces in different truss elements.	$25,000
Mechanical Engineering	Wind tunnel lab equipment and supplies	Instrumented wind turbine blade for wind tunnel testing, models for mechanics of material testing, photo-elastic model of wind turbine blade and jigs for material testing.	$30,000

YOU IMPACT DESIGN

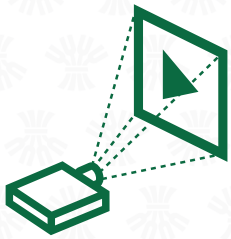
ENGINEERING COMMUNICATION II (GE 133) – CAD COMPATIBLE 3D PRINTERS



TOTAL: $5,500

While CAD can be fun as an activity unto itself, students will close the loop on CAD if they can produce something that they have designed. Using 3D printers to produce their designs, they will engage in an activity that may be utilized later in their degrees. EAT funding helped the college purchase 10 CAD compatible 3D printers.

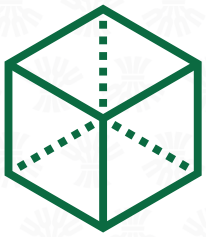
ENGINEERING COMMUNICATION II, RESEARCH (GE 133) – PROJECTORS



TOTAL: $29,500

Two of the primary deliverables of the research module in GE 133 are a poster design and a presentation. Posters reflect students' mastery of the concepts and tools for conducting research and allow students to apply knowledge and skills they have learned in multiple courses/modules during first year. EAT funding allows for the purchase of 27 new classroom projectors to display electronic posters during their presentations as an economical and flexible replacement for printed posters.

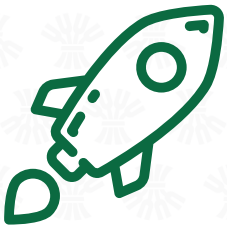
ENGINEERING COMMUNICATION I, DRAWING & SKETCHING (GE 132) – 3D FIGURES



TOTAL: $16,000

A challenge when learning the basics of drawing and sketching is drawing isometric and orthographic projections of shapes and figures and translating back and forth between these two types of drawings. When learning these skills, it is very helpful to have actual 3D figures available to challenge students and demonstrate how specific drawings are correct or incorrect. EAT donors allowed for the purchase of a large set of basic shapes that combine to make a wide assortment of composite shapes, so students can work in small groups to creatively challenge each other and practice making specific shapes to understand key principles.

DESIGN II (GE 143) – MODEL ROCKETRY DESIGN PROJECT



TOTAL: $4,500

This course enables a full cycle of design experience through to the proof of concept/prototyping stage in a disciplinary setting, as students will have chosen their disciplines by this point in the term. Students will explore a discipline-specific design problem and a multidisciplinary project requiring an interdisciplinary team solution. EAT has funded a model rocketry design project complete with functional payloads, thanks to the purchase of equipment for testing motors, programming instruments and controls, and for sensing environmental variables.

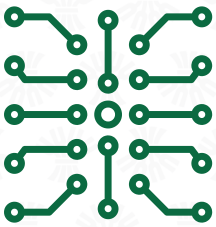
YOU IMPACT LEARNING

INTRO TO ENGINEERING I, INDIGENIZATION (GE 102) – PROFILING INDIGENOUS ENGINEERED TECHNOLOGY

TOTAL: $40,000

EAT funding is introducing custom-made examples of Indigenous technology for display and interaction. The funding will facilitate the purchase of examples of these technologies, or the materials and labour for custom construction, as well as the development of traditional teachings by Indigenous knowledge keepers to accompany the examples. Examples of technology demonstrated could include canoes, snowshoes, tipis, travois or ice jiggers.

ELECTRICAL CIRCUITS I/II (GE 152 & 153)



TOTAL: $6,000

Students will interact with electrical circuits largely in a simulation platform to virtually construct DC and AC circuits and intuitively visualize and analyze their operation. The Locktronics component kits purchased by the EAT will demonstrate how simple circuits can be constructed and demonstrate basic motor and generator principles as well as solar power generation and storage. These kits feature easy-to-use grids of connective posts for clear circuit-building to demonstrate how theoretical systems can be realized using simple practical elements.

ENGINEERING MECHANICS II, STATICS (GE 123) – NEW LAB KITS

TOTAL: $41,500

With the lab of the new first-year statics course moving from Physics to Engineering, there was an urgent need to acquire lab equipment for this course. The college identified a very talented mechanical engineering student, who is an apprentice machinist, to produce better quality equipment for half of the usual purchase cost. With EAT support, this student was hired for the summer to create 15 lab kits so students can work in small groups of four.

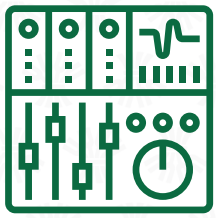
ENGINEERING MECHANICS I, DYNAMICS (GE 122) – LAUNCHER KITS

TOTAL: $48,500

EAT funding will purchase the most versatile and fun lab kits, with the greatest experiential learning potential available. Offering ballistic launcher systems and smart carts that all supply great kinematic data in real time, wirelessly, these kits will be made available for classes of 100 students in each Dynamics lab, requiring 30 kits in total.

YOU IMPACT STUDENT TOOLS

PROCESS ENGINEERING (GE 163) – PROGRAMMABLE LOGIC CONTROLLER APPLICATION MIXING PROCESS



TOTAL: $25,000

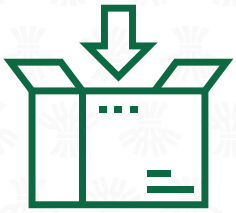
Process engineering examines, models and simulates systems using mathematics, science, engineering and computer science, often examining multivariable non-linear systems with convoluted degrees of freedom analyses. The ability to observe and interact with a real-world multiunit process with interdependent variables would provide a grounding experience for first-year students. EAT funding allows us to use a local supplier to fabricate the apparatus and Programmable Logic Controller Application Mixing Process to achieve this.

LOANABLE COMPUTERS AND CALCULATORS

TOTAL: $11,000

For the first time at USask, first-year engineering students will be required to have a laptop and calculator. EAT funding allows us to purchase 10 laptops and 20 scientific calculators to loan to students in need, to enhance our program's accessibility for those in challenging economic circumstances.

LAB EQUIPMENT STORAGE AND TRANSPORTATION

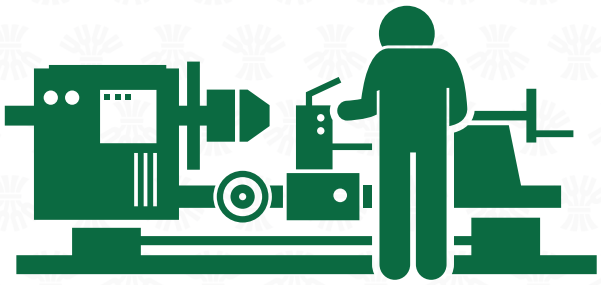


TOTAL: $7,500

Many of the first-year labs, for the first time in a long time, will take place in the Engineering Building! With a lot of new lab equipment comes the requirement to store it and to move it around. Getting lab equipment for up to 25 groups from storage to classrooms will take additional infrastructure. Carts can serve as in situ shelves and as transport media.

YOU IMPACT KNOWLEDGE

NEW CNC MILL & LATHE STATION



The college's existing manufacturing lab will be significantly enhanced from the current manually operated machines into a full CNC-capable lab, thanks to $125,000 from the Engineering Advancement Trust.

The new CNC (computerized numerical control) centre will help undergraduates develop skills through experiential learning. Many industries use CNC and AI-learning equipment to build the projects that our students will be designing as full-fledged engineers. The CNC lab will provide our students with experience that takes them to the next level when they enter the workforce.

The HAAS TL-1 lathe is a CNC lathe that can be operated manually or fully CNC capable. This unit is easy to operate and is a good transition from a completely manual lathe. The lathe comes with several options for tooling support, such as the common single tool post used in most manual lathes, as well as a multi-turret that enables up to eight tools to be mounted to complete jobs more efficiently.

The HAAS Mini Mill has full-size machine features; the nomenclature of "mini" refers more to the overall footprint of the machine. The mill has three-axis, 6000 RPM and has a 10-tool capacity. Most of the parts that are being machined in the centre are smaller and would not require an extremely large machine. The operation of this CNC mill is fully enclosed to protect the operator.

Thank you very much for your contributions. It really helps students to have the best tools available to learn as much as we can during our time at USask.

MASON KRAUSHNAR
FOURTH-YEAR MECHANICAL ENGINEERING STUDENT

EAT ALUMNI SERVICE AWARDS

We recognize the invaluable contributions of alumni whose volunteerism, dedication and passion have sustained our USask Engineering community.

Wayne Clifton (BE 1963, Civil)

Wayne was a founding trustee and original chair of the Engineering Advancement Trust, a position he held for nearly 25 years, Wayne provided gifts of time, talent and treasure and was an important source of strength for the college. His dedication ensured a means of maintaining the network, a way of staying in touch with those who have a natural affinity for the college.

Lindsay Milne (BE 1959, Geological)

Lindsay joined a group of USask engineers in 1986 to form what would become known as the Calgary Engineering "friend-raising" committee. The alumni engagements were great successes and evolved to integrate a fundraising component. In 1990, Lindsay helped to lead the first fundraising reception at the Calgary Petroleum Club, raising over $110,000. This led to the "Calgary Engineers" campaign that supported the success of the Engineering Advancement Trust for decades.

John Niedermaier (BE 1967, Agricultural Engineering)

John has dedicated over 30 years of service, from leading the Friends of the College of Engineering at the University of Saskatchewan (FOCUS) to chairing the fundraising committee. John mentored many young alumni and ensured their volunteer experience was memorable and positive, providing rich support and guidance for incoming leaders. He continues to make campaign calls to this day.

EAT ALUMNI TRUSTEES & VOLUNTEERS

We are grateful to these alumni and students for their dedication and service.

EAT ALUMNI TRUSTEES

Myron Stadnyk, Chair BE 1985, Mechanical
Blair Hockley, Fundraising Committee Chair BE 1996, Mechanical (Deceased)
Ian Campbell BE 1980, Civil
Heather Isidoro BE 2000, Geological
Rod Karius BE 1976, Civil
Lesley McGilp BE 1999, Mechanical
Bert Munro BE 1990, Civil
Russ Renneberg BE 1976, Civil
Jason Skehar BE 1994, Mechanical
Al Schreiner, Honourary Lifetime Trustee BE 1963, Mechanical

EAT CAMPAIGN ALUMNI VOLUNTEERS

Julia Batiuk BE 2020, Chemical
Ian Campbell BE 1980, Civil
Alex Campbell BE 1967 MSc 1969, Chemical
Kevin Fieldan BE 1995, Mechanical
Ben Gagnon BE 2019, Mechanical
Blair Hockley BE 1996, Mechanical
Patrick Kolla BE 2012, Mechanical
Austin Legacy BE 2019, Chemical
Stephanie Lipoth BE 2020, Environmental
Michael C. Maguire BE 1987, EP MSc 1992, Physics
John Niedermaier BE 1963, Ag Engineering
Stephen Owuamanam MSc 2019, Mechanical
Myron Stadnyk BE 1985, Mechanical
Bob Steele BE 1970, Electrical
Bjorn Vors BE 2017, Civil

EAT CAMPAIGN STUDENT VOLUNTEERS

Afia Attafuah Electrical Engineering
Kasey Burgess Environmental Engineering
Hammed Ejalonibu Biomedical Engineering
Libby Epoch Civil Engineering
Ashton Fritz Engineering Physics
Mason Kraushar Mechanical Engineering
Robert Moser Civil Engineering
Jude Okolie Chemical & Biological Engineering
Makayla Scheller Geological Engineering
Gaurub Sherab Electrical Engineering
Matthew Taylor Engineering Physics

BUILDING STUDENT COMMUNITY

The EAT is committed to building community among students and among students and alumni.

Second years celebrated at Hard Hat Ceremony

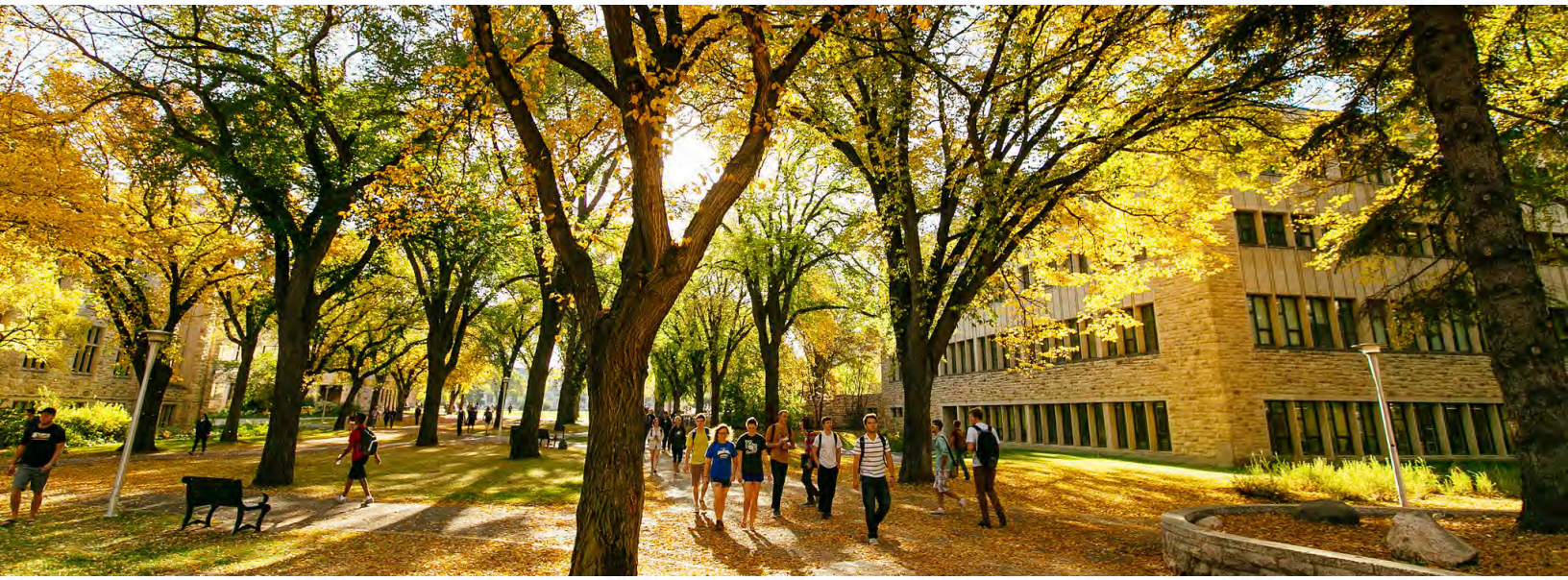
During the virtual Hard Hat Ceremony, all second-year engineering students were welcomed into their disciplines with a colourful display of hard hats representing each discipline and a speech given by an alum and/or an EAT member.

Grad students stage 3-Minute Thesis (3MT) competition

Hosted by the Engineering Graduate Community Council (EGCC), the 3MT competition showcases three-minute presentations by MSc and PhD engineering students about their research. Alumni donors to the Engineering Advancement Trust help EGCC keep the engineering graduate student community strong by helping it engage with the broader community and providing students experience in presenting their research.

Class of 2021 sent off with advice from USask alumni

With virtual convocation celebrations, the EAT stepped in to help make this important milestone memorable for graduates. A custom booklet filled with messages of congratulations, advice and words of wisdom from USask Engineering alumni was mailed to each graduate.



STUDENTS TODAY, ALUMNI FOREVER

Graduating class campaign returns in 2021.

Many alumni remember the graduating class pledge program as the start of their relationship with the college as alumni. From 1978 to 1999, this campaign asked grads to pledge a future gift to be made within five years.

With the leadership of Engineering Advancement Trust and alumni volunteers, the graduating class campaign returned with the Engineering Class of 2021.

As graduates take the first steps into the next chapter of their lives, we ask them to consider who they want to be.

As they become a USask alum, we ask them to be dedicated, engaged, generous. We believe they can be proud USask Engineers by staying involved and making gifts of time, talent and treasure.

Through this campaign, members of the Class of 2021 set their intention to stay engaged and give back to USask Engineering. They chose to follow in the footsteps of alumni before them, reviving a college tradition while taking steps to set the course for their futures.

Graduates join a proud and loyal community of engineering alumni who genuinely care about their future and success. We invest our time, energy and donations to enhance the student experience and send graduates into the world with the tools they need to thrive.

My involvement with the Calgary alumni chapter keeps me connected to a strong community. It's important we provide this opportunity for the next generation.

HEATHER ISIDORO, BE 2000, EAT TRUSTEE

REMEMBERING OUR FRIEND, BLAIR HOCKLEY (BE'96, MECHANICAL)

The College of Engineering is deeply saddened by the passing of Blair Hockley, a dedicated alumni volunteer and trustee of the Engineering Advancement Trust.

As a student, Blair was involved in the Saskatoon Engineering Student Society (SESS) executive, serving as president. He was a lead coordinator of Spectrum and facilitated the mentorship program between alumni and students. As a graduate, Blair maintained his connection to the college and became involved with alumni and engaging local USask engineers in his new community in Calgary. From organizing events to volunteering for fund-raising campaigns, Blair's continued service deepened over the years.

In 2017, Blair was asked to join the Engineering Advancement Trust board of trustees, a role he faithfully served in until his passing. During his years on the board, he coordinated the Calgary Engineers and broader alumni campaign in support of the Engineering Advancement Trust.

Blair will be remembered for his passion, dedication and larger-than-life spirit of generosity. In memory of Blair, his invaluable contributions to this community and decades of service, the Blair Hockley Memorial Scholarship has been created to carry his legacy forward with aspiring engineers.

Contributions to this memorial award can be made online or by mail to the University of Saskatchewan.

LEAVE YOUR LEGACY, BUILD OUR FUTURE

The College of Engineering is humbled by the spirit of generosity in many alumni who choose to support the Engineering Advancement Trust beyond their lifetimes.

If you are interested in more information about leaving a legacy gift or would like to support the future of the College of Engineering with a gift in your will, please reach out to us.

Richelle Kenn, CFRE
Development Officer
University of Saskatchewan
College of Engineering

Richelle.Kenn@usask.ca
306-966-4983

BE WHAT THE WORLD NEEDS

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