



RESS

Regina Engineering Students' Society

Regina Engineering Students' Society
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RESS 2011 Annual Report to APEGS

January 31st, 2012

Written by members of the RESS and associate groups

Compiled and edited by Jason Whitelaw, VP Professional Affairs, RESS

With thanks to APEGS for their generous sponsorship.

Introduction

Throughout 2011, the Regina Engineering Students' Society has been participating in professional development conferences, providing events and services to students, helping local charities raise money, promoting engineering to all areas and age groups, and encouraging and providing paths for further professional development to the students whom we represent. This paper will provide insight into these programs and events, which would not be possible without the continued support of the Association of Professional Engineers and Geoscientists of Saskatchewan.

Social Events

Year 1-4, by Chris Gienow

The Year 1-4 Reception has been organized by the RESS for the past 21 years. The idea behind the reception is to give students a chance to network in a professional setting. This event gives first to final year students the opportunity to network with faculty and industry sponsors. In years past, a scholarship has been awarded through the year 1-4 reception.

The night is set up to allow students to network with industry participants, combined with several guest speakers educating us about opportunities in the engineering field, what engineering is for them, and what their main duties include. Every year a keynote speaker is picked to help showcase what engineering is and to help motivate students, faculty, and industry representatives to achieve greatness in their professional careers. This year's keynote speaker was Mark Wittrup, the assistant deputy minister of the environment.

At the Year 1-4 Reception, APEGS has a strong presence through their attending representatives, informational booth, and an allotted speaking time during the evening's events. This gives APEGS an opportunity to talk to students and show them what APEGS is all about.

Not only is year 1-4 a great networking event, it also allows students a chance to see the different disciplines of engineering. The event is held in the fall, which helps first year students with their decision of what discipline they are interested in focusing on.



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National Engineering Week, by Garrett Genge

Since 1992, National Engineering Month has been used as an opportunity to raise public awareness of the importance of engineering and technology in our daily lives and to encourage young people to consider careers in engineering and technology. The events that occur during this week are organized and run by volunteers.

Last year, the RESS hosted five events during the week of March 13th to bolster inner faculty pride through feats of physical toughness, engineering prowess, culinary skill, and of course taking time to enjoy the engineers' favourite BEvERage.

Last year's events were:

Monday: Bowling Night

Tuesday: Engineering Competition (Wind Turbine Competition)

Wednesday: Iron Chef: RESS Edition

Thursday: Beer In The Lounge

Friday: Movie Night and Indoor Golfing

Last year marked the first year that the RESS hosted an Engineering Week in several years, and it was met with great enthusiasm and excitement for the following year's Engineering Week. This year the RESS is planning to continue with a similar schedule with a few changes. Instead of bowling, we will be having a dodge ball tournament held at the Campbell High School gym, indoor golfing will be replaced with a more group-oriented event, and a professional development seminar and all candidate open forum will be added to the schedule for the RESS general election taking place the following week. I will be contacting the SDC Chair Stephanie Campbell for a list of presenters; she has informed me that APEGS has access to a number of great presenters that would be an excellent addition to our Engineering Week line-up. The RESS along with our members are extremely excited for this event and we thank the SDC for funding our Engineering Week events.





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Beerfest, by Austin Meldrum

Beerfest is a social event held at the Owl by the Regina Engineering Students' Society. The event is held in the fall and winter semesters, with about 800 attendees at each. Students and alumni are brought together through cheap drinks and are able to blow off a little steam in the middle of the semester.

Conferences/Professional Development Seminars

WESST EM, by Kaylee Puchala

WESST EM is held every year in a different city across western Canada. In 2011, it was held in Vancouver by Simon Fraser University (SFU). WESST EM gives engineering student council members the opportunity to meet other students and attend professional development seminars, and the conference also aids in the transition of the Regina Engineering Student Council. Some of the seminars include round table, speakers, and past WESST members passing on knowledge. This weekend gives students the opportunity to learn from other schools and collaborate with other students. The connections that are made at the WESST EM Conference are invaluable and help throughout the entire year with planning events such as WEC.



CFES Congress, by Kyle Smyth

The Canadian Federation of Engineering Students is a national, bilingual, student run organization that provides services to its members in the form of development conferences and events.



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CFES Congress is an annual, bi-lingual, student-run conference that has two primary objectives. The first is that CFES Congress is the annual general meeting of the CFES, and the second is that it provides a platform from which students can collaborate with and learn from our industry partners, sponsors, and fellow students. CFES Congress is hosted by a university that is a member of the CFES; past locations include Hamilton, Ontario and St. John's, Newfoundland.

Congress is a weeklong event where delegates of the many schools have a chance to network and learn from each other. Throughout the day, there are professional development sessions, round-table discussions, industry networking, and more. The evening activities allow students to socialize with each other and for the host school to showcase their city/campus. Last year in St. John's, the Memorial University of Newfoundland Student Society "screeched in" everyone.

The Regina Engineering Students' Society is one of the many undergraduate engineering societies across Canada that is a member of this nation-wide organization. We pride ourselves on being one of the smallest schools with an equal or larger representation at this event. Many of the RESS' current activities were ideas that were shared and learned through the channels and round-table discussions that were set up at Congress.



Presidents' Meeting, by Kyle Smyth

Presidents' Meeting is another CFES conference; however, it is a much smaller and more intimate event. Each school sends a single delegate (usually their Vice-President External). The goal of this event is to introduce the representatives of each school to the CFES organization, the CFES executive team, and to each other. Information sharing sessions take place throughout the event, including topics like "What does your society do best/worst" or "Engineering competition ideas". There are also brainstorming sessions to help plan the content that appears at CFES Congress as well as ideas for the CFES's charity



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initiatives for the year. This conference is extremely useful in the development of our student society.

Engineers Without Borders National Conference, by Ali Molaro

By sending thirteen delegates to EWB national conference this year, EWB and APEGS have invested in future leaders. The conference had a heavy emphasis on building today's "global engineer": A global engineer uses the critical thinking and problem solving skills built within the engineering curriculum and profession to apply to complex problems such as poverty and the environment.

Conference presenters drew from their engineering experience and passion for international development to inspire our generation of future engineers to push the ethics and integrity of the profession to the next level. Beyond the engineering focus, delegates attended workshops to improve personal skills such as leadership, public speaking, critical thinking, and creativity.

Members of the EWB Regina chapter are available at anytime to facilitate a "lunch and learn" type workshop with APEGS. We can communicate the outcomes of the National Conference, or we could talk about experience overseas and our work in Canada. APEGS will be listed as a funder in the 2011/2012 Annual Report.

Competitions

Western Engineering Competition, by Kyle Smyth

The Western Engineering Competition is five-day, annual competition hosted in western Canada and open to any student whose student society is a member of the Western Engineering Student Society Team (WESST).

Competitions include:

- Junior Team Design, teams of four first- and second-year students solve a physical engineering problem with random components.
- Senior Team Design, teams of four use a VEX Robotics kit to perform some function.
- Communication Engineering, teams of one or two prepare a thirty-minute presentation on a topic technical in nature and demonstrate its economic, environmental, and social impacts.
- Innovative Design, teams of four present, and showcase in a trade-show format, a novel design that solves a problem in society.



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- Consulting Engineering, teams of four are given a problem and must come up with a solution in report format.
- Impromptu Debate, teams of two students present convincing, well-constructed arguments on a wide range of issues

At last year's competition, hosted at the University of Saskatchewan, APEGS had a very large presence. APEGS members served as judges, staffed a career fair booth, and delivered the keynote address at the awards banquet.

The Western Engineering Competition is a very effective way of getting academically oriented students outside of the classroom and involved in our student society and events, challenging students and giving them an opportunity to apply their skills, and building relationships with students and industry representatives from across the country.



Regina Engineering Competition, by Kyle Smyth

The Regina Engineering Competition is the regional qualifier to determine which delegates to send to the Western Engineering Competition. Featured every year is the junior team design competition, which allows first- and second-year students to solve a physical engineering problem with random components from candlesticks to rubber

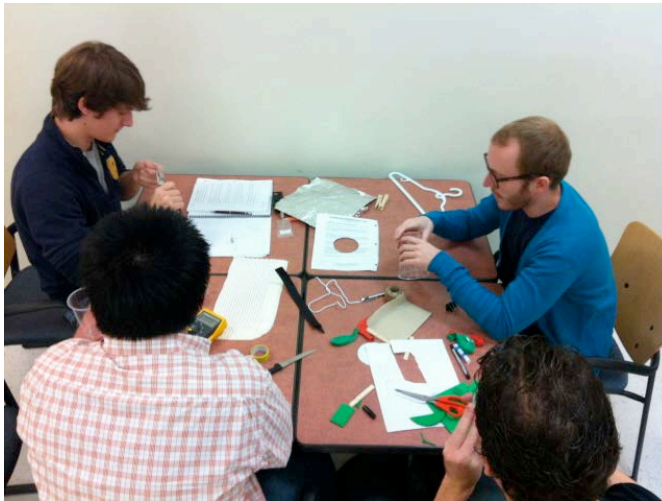


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bands. Occasionally, other competitions held at WEC will be run, depending on the level of interest. REC is a great opportunity for students to apply their engineering skills in a friendly competition as well as increase the awareness of the RESS. There is a panel of judges, most of them being APEGS members from industry, that judge these competitions and have the final say who will represent the University of Regina at the Western Engineering Competition.



Canadian Engineering Competition, by Kyle Smyth

The Canadian Engineering Competition is another of the Canadian Federation of Engineering Students' annual events. The Canadian Engineering Competition allows the top two placing teams from each event in the Western Engineering Competition, the Ontario Engineering Competition, Compétition Québécoise d'Ingénierie, and the Atlantic Engineering Competition. In 2011, our Communication Engineering team earned one of the top three spots, and represented the University of Regina at the Canadian Engineering Competition. For this year's competition, the University of Regina's Junior Design team will be representing us at the competition.

Canstruction, by Heidi Smithson

Canstruction is an annual event held in cities around the world to raise substantial donations for local food banks. The Faculty of Engineering and Applied Science at the University of Regina has entered a team composed of undergraduate students and two faculty/staff advisors in the 2009, 2010, and 2011 competitions. The team has achieved tremendous success all three years, receiving numerous top awards in competition with major engineering, design, and architectural firms from across Regina.



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During Canstruction, teams of engineers, designers, and/or architects construct large sculptures from cans of food. Each structure is typically composed of thousands of cans and is built within a space ten feet wide by 10 feet long by 8 feet high. The sculptures are displayed publically for two weeks and are then dismantled and the cans delivered to the sponsored food banks.

The U of R team's past projects over three years have resulted in the donation of a total of nearly 10,000 cans of food to the Regina and District Food Bank, representing more than \$10,000 thousand dollars worth of fundraising accomplished by this small team of approximately 8 students each year. The team has largely been composed of first-year engineering students, with occasional participation of more senior students and students from other faculties, so the team is relatively new each year.

The U of R Canstruction project is a true engineering and design project in every sense. Planning begins in October with the build occurring in February or March, so it is a 5-6 month project. The team meets regularly (usually weekly) for project planning and communication. Students on the team, with the assistance of a faculty supervisor and an additional staff member, are responsible for brainstorming a design, drafting the design plans, calculating the number of cans needed, and selecting the can shapes, sizes, colours, and contents. The design must meet certain constraints and criteria set out by the food bank and competition organizers. Design considerations include both aesthetics and structural stability. Also, the cans must be ordered and delivered in advance, which requires significant planning. In addition, the students engage in various fundraising activities, which have included soliciting donations from faculty, students, and numerous on-campus sources, selling tickets to a steak night fundraiser, and planning and executing hotdog sales. This also involves advertising the fundraising events and developing promotional materials and messaging. The structure must be designed so that the number of cans needed, plus additional supplies such as structural support materials, can be purchased within the budget. During the Canstruction event, the students are responsible for the actual construction of the sculpture and troubleshooting design problems that might occur. The build takes place in public and must be completed within a 12-hour period on the build day. The team is also responsible for deconstruction of the sculpture and some site cleanup at the end of the competition. During the build and at the awards banquet, the students also have an opportunity to meet and interact with engineers and designers from the other teams. More senior team members who have participated in the past also have an opportunity, throughout this project, to provide mentorship to the less experienced students on the team and to practice their leadership skills.

Canstruction attracts significant attention from the local media, and the U of R team is a popular choice for interviews and exposure. The U of R team was selected by Global Television to be filmed during one of its builds. The film was used to produce a short, time-compressed video of the build, which was uploaded to the Global TV Facebook page and



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has appeared on the university website. Several students in the past have been interviewed for TV, radio, and the LeaderPost regarding the project and their involvement. The design was featured on the front page of the LeaderPost in 2010. The Faculty also promotes the event, with features on the faculty and university websites, in the faculty newsletter, and in other promotional venues. Sponsors' names are included on the signage displayed with the sculptures during the two-week event, and the sponsors are acknowledged in other promotions.

The project teaches the students about design but also provides an opportunity to engage in community service, outreach, volunteerism, and communication. The students learn about the role played by the Regina and District Food Bank in the local community, as well as the impact of poverty and hunger in communities across North America and around the world. This event is a major donation drive for food banks across North America. Not only do the students learn about the extent and impacts of hunger in their own community, but their efforts are part of the greater Canstruction competition, as the entries of the major award winners from each local competition are submitted, via photos, to national and international competitions. This gives the students a chance to learn how much impact their efforts have on both a local and global scale and how much more work is needed to reduce hunger and poverty in their own community as well as globally. The students then take what they have learned into their interactions with the media and incorporate it into their fundraising and other communications, which include presentations in engineering classes such as the first year engineering design and communications course. In the future, graduates who have been team members might also be inspired to develop and lead their own Canstruction teams in their communities once they have graduated and will perhaps even initiate Canstruction events in communities that do not currently participate.

This project involves significant mentorship, project management, design experience, fundraising, communication, and community service. In addition to an excellent design and project management learning opportunity, Canstruction gives the students who participate excellent exposure to a significant social issue in their community and demonstrates how engineers can apply their skills, through volunteerism, to provide valuable service to their communities.





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Saskatchewan Automotive Engineering (SAE - now Cougar Racing), by Jason Whitelaw

The SAE team competed in the 2011 BAJA event and placed 75th out of over 150 schools. As our team competes in this event with a tiny budget, and very few on-campus resources such as machining shops, this was an incredible accomplishment.

This project challenges aspiring engineers with design and marketing challenges, as well as builds teamwork. It also allows students to apply engineering principles learned in classes directly to a real-world project that can be built and tested.

The Cougar Racing team would like to extend their deepest thanks for the continued support of APEGS in helping to fund this project.



Charity Events

Pie-In-The-Eye, by Matt Cooke

Pie in the Eye (PITE) is an annual charity fundraiser ran by the RESS. It raises money by citizens of Regina phoning the RESS and putting in an order for a pie. This order sends a victim a pie valued at the donated amount. Volunteers from the Regina Engineering Students' Society, along with engineering students, will then find the person on the order form and offer them options. If the receiver chooses to pass the pie along, they donate the current amount on the pie (matching the sender) and increase the value of the pie by a minimum of five dollars. The second option would be to receive a "Pie-in-the-Eye" for



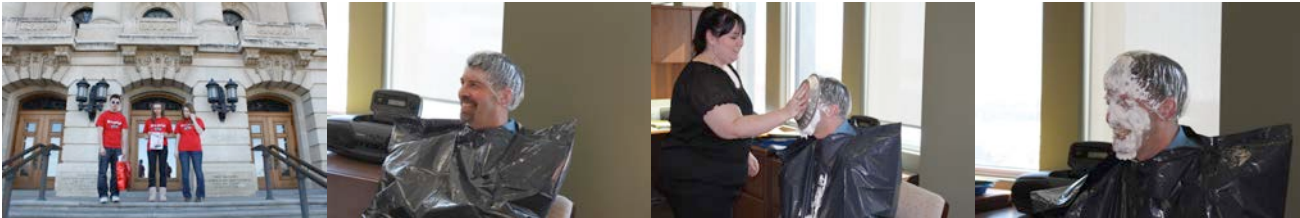
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charity. Orders can raise money quite quickly, and pies have been known to start at \$10 and increase to over \$150 on \$5 dollar increments. As a result, this can be a very effective fundraiser. PITE has raised between \$3000 - \$7000 annually. Charities in the past have included National Service Dogs, Regina Food for Learning, and the United Way.

Attached are some photos. One picture shows students rejected at security when attempting to pie Doug Moen (Deputy Minister) at the Legislative Building in Regina. Another attached picture is Doug Matthies (Deputy Minister of Finance) receiving a pie for Regina Food for Learning. This pie was estimated to have generated over \$500 for charity.



Milk & Cookies, by Jason Whitelaw

Each year the RESS sells milk and cookies in the engineering lounge with 100% of the revenues generated going to a different charitable organization each year. The RESS donates the milk and cookies as their contribution to this event, and RESS members donate their time to run the sale. Although small, this event successfully raises between \$400-750 each year.