



Update from the CFES

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Canadian Federation of Engineering Students

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Who am I and what is the CFES?

My name is Julie Tseng, and I'm the current and outgoing President of the CFES. CFES stands for the Canadian Federation of Engineering Students; we're a completely student-run organization that encompasses 74,000 students from over fifty universities across Canada.

By our constitution, the CFES has the following mission:

The CFES supports growth and communication within its members to ensure their moral, intellectual, cultural, academic, social and economic well-being. The Federation represents and promotes Canadian undergraduate engineering students on a national and international level.

In a nutshell, the CFES strives to serve engineering student societies and to help our members improve the experience of Canadian undergraduate engineering students from across the country. This is achieved through three main pillars: services such as the Canadian Engineering Competition and the Conference on Diversity in Engineering, sharing best practices amongst the university engineering student societies, and advocacy.

Recap: Engineers Canada AGM, May 2016

When I spoke at my first Engineers Canada meeting in PEI, I was just beginning my term as President and outlined the overarching goal of my team for the year. The overarching goal comprises of three main areas in which we wanted to pursue work:

1. Ensuring that the Federation is operationally sound and empowered to achieve long term goals;
2. Building a better understanding of the systems that affect students such as the accreditation system, who makes decisions regarding the system, and the current state;
3. Creating infrastructure and processes to unify student perspective in a robust way.

What did we achieve this year?

Much of the work we did this year does fall into progress in the three areas listed above. The CFES Officer Team members have been absolutely critical in delivering on these accomplishments this past year and should be commended for their dedication and hard work to make fast, sustainable changes within the organization.

Area 1

- Stabilized and streamlined finances, created operational timeline, updated governing documents
- Increased funding for small schools with smaller budgets to attend CFES events
- New documentation practices for transitioning from year to year
- New training and transitioning meeting strategy
- New visual identity guide for the organization

- Social media presence makeover including a new website (coming soon!) and updated Facebook graphics
- New wiki for internal record keeping, updates, meeting minutes tracking
- Progress on creation of a Coalition of International Engineering Student Organizations, which is a collaborative effort spearheaded by the CFES with our European, German, and American student partner organizations to set our Global Engineering Competition up for success

Area 2

- Active participation and presence at events of our partner organizations and using this systems knowledge to further educate constituents on pertinent issues
- Reported back to the students on the Forum on Accreditation attended by the CFES in August; engaged with the student representatives on what we learned about the system and empowered them to bring that knowledge back to their respective schools
- Regularly attended the Engineers Without Borders ChangeLab to participate in the discussion on the future of the engineering profession

Area 3: On unifying student perspective

In May, I spoke about the growing student interest in being active participants in decisions regarding our future professions and the education system which we are going through. This was reflected in the fact that the membership have supported the change from a hired Academic Commissioner to an elected VP Academic. This year, the Federation has tried to answer the following questions:

1. How can we thoroughly collect the diverse perspectives of our members?
2. How do we unify these voices and represent them in meaningful and impactful ways?
3. Challenges such as yearly turnover, bias from insufficient due diligence in research, no mechanism or thought about strategy, workload on CFES Officer Team

As engineering students, it was logical to apply our backgrounds in process design to develop methodology to achieve these ends. Last year's CFES Officer Team created and initialized the CFES Document of Stances, whereby we endorsed the Engineers Canada 30 by 30 stance. However, no strong recommendations were made by the previous team as to how to further use the document.

At the CFES President's Meeting, which was hosted by Memorial University in September 2016, we created the Advocacy Working Group and elected 2 co-heads for the group from the Engineering Society executives in the room, one of whom served multiple terms as a VP Academic for his own Engineering Society back home. Between September and January, the Advocacy Group co-heads set up infrastructure, while the VP Academic and I took care of developing a process and timeline for the working group mechanism to ensure that they were doing research and producing stances sustainably.

The process was presented by the VP Academic at Congress 2017, which is the annual general meeting of the organization and takes place in the first week of January. The process was generalized and outlined as follows:

1. Congress in January:
 - a. The CFES VP Academic and President educate membership on topics they feel have come up in conversations and discussions with relevant organizations. These topics can also be submitted in advance by member societies to be researched and presented by a representative of the society or a member of the CFES Executive.
 - b. The members will submit, as motions to the Plenary session at Congress, mandates for the Advocacy Working Group and/or CFES Executive to perform research and/or prepare reports, recommend stances to the next membership.
2. After Congress, the Working Group will make a call to members of student societies across Canada for general members, advertising the themes and topics of research mandated by the members.
3. Between Congress and President's Meeting in September, the Working Group will structure their research and writing process with guidance from the CFES Executive if needed.
4. In September, the Working Group will present interim findings and drafts of their reports to gather feedback from member schools and allow the members to consult with their constituents as well.
5. Between President's Meeting and Congress, the Working Group will continue to do their work and prepare recommendations or reports as necessary.
6. At the following Congress, there will be a final presentation of the report and recommendations. Any relevant stances that derive from the work would be voted on by the membership at this point.

It is important to note that stances and reports can also be submitted by regional engineering student associations and individual schools as well, if they so wish. This process for research and stance formulation is advantageous as it allows the Federation to:

- Create more opportunities for students to get involved in less time-consuming ways, as not everyone wants to be a "student politician"
 - Distribute the work from the CFES Officer Team, especially since stances need to and should be member-driven
 - Give members opportunities to contribute to the organization's work
 - Have a longer timeline to encourage a high degree of due diligence in the research process.
- Relevant time consuming tasks in this process include:
- o Talking to the right experts to gather correct information or sufficient perspective to ensure a balanced view of the facts
 - o Using surveys to gather concrete numbers and data
 - o Feedback process to ensure quality report
- Ensure that stances are backed by independent research and are robust to be advocated on for multiple years

This process was extremely well-received by the membership and resulted in many Plenary motions mandating research and the development of stances on topics such as:

- Sustainability and technology
- Undergraduate engineering education

For the reader's interest, the following "Be It Resolved That" statement summarizes the specific aspects desired by the membership in the education report:

The Vice President Academic work in conjunction with the Advocacy Working Group to investigate the various concerns held by member schools across the country that relate to undergraduate engineering education. The impact of the following areas of interest on the CFES and its members shall be researched and evaluated:

- 1. The professors' strengths, interests, and role within their faculty and how this affects the student learning experience. This shall include an investigation of the balance of research and teaching priorities at member schools*
- 2. The comparison of experiential vs traditional education methods with reference sources that include but are not limited to the NCDEAS White Paper on an Outcomes-Based Vision for Engineering Program Accreditation and the four regional Memorandums*
- 3. The effect on engineering post-secondary institutions and the value of the degrees offered caused by infringements of Academic Integrity*

In addition to this mandated report, the Quebec engineering student association CREIQ had already produced a well-researched document on excessive workloads in engineering programs across Canada. The VP Academic and I guided the Quebec Ambassador in navigating the new stance passing process we had developed.

As a result, the following stance was adopted by the CFES membership:

The CFES believes that the Canadian Engineering Accreditation Board should acknowledge the causes and consequences of excessive academic workload and investigate regulation to reduce their effects on students.

Further, we will be pursuing a national survey modeled after the survey completed by CREIQ to further bolster this national stance.

Concluding Thoughts

Reflecting on my experience as President, I have been truly excited by these developments in the CFES and so invigorated by the interest that my peers have had; they are quite excited to learn about their education system, explore the future of the profession, and have a hand in shaping it. I do believe that the Federation has been able to answer, at least for the time being, the question of "How do we unify these voices and represent them at the table?"

And now that we have the how, I encourage you to pay attention to what students have to say and engage with us on these topics that we also care about sooner rather than later. We are willing and excited to help. I am a firm believer that students can provide the dynamic feedback that Engineers Canada and the provincial regulators need to stay relevant and do relevant work. As this may be the last time you hear from me, thank you for your time and the opportunity to attend your meetings. This experience has been such an enjoyable and welcoming one. Best of luck with your future work!