

## **Introduction**

This semester has brought many new ideas and challenges to the table in terms of representing our school and learning how we can better ourselves for the benefit of our students. Here is my report on this semester's activities as well as some recommendations I would make to our engineering student society. I will start with a summary of each conference and list some key takeaways and advice, which come from me as well as my delegates' personal notes and recaps.

## **Glossary**

ESSCO : Engineering Student's Society Council of Ontario

CFES : Canadian Federation of Engineering Students

AGM : Annual General Meeting

PM : President's Meeting

CDE : Conference on Diversity in Engineering

PEO - SC : Professional Engineers Ontario - Student Conference

## **ESSCO AGM 2018 (York University, Date)**

ESSCO AGM introduces the new council of VP Externals to ESSCO, PEO, OSPE and the CFES as well as their new role on council. The focus of this conference is leadership development and the sharing of best practices. This is achieved by having external speakers and previous ESSCO alumni run sessions and speak to delegates. The ESSCO Executives for the next year are elected at ESSCO AGM, and the ESSCO Executive and VPs External of member schools set the direction of the organization. The delegates were able to attend sessions on PEO, diversity and inclusivity, mental health, sponsorship, mentorship, relationship based-inclusion, as well as a number of others, mostly run by students such as ourselves who have been through the process of running an engsoc.

Here are some key takeaways of the sessions :

- Delegates learned about ESSCO and CFES (more info can be found on their respective websites : <http://www.essco.ca/> and <http://cfes.ca/>)
- They also learned about PEO, their mission and how the process of getting your P. Eng works. More info can be found at : <http://www.peo.on.ca/>
- Engineers need to focus on being visible, friendly, and involved in politics or other disciplines
- "Politics" should be about advocacy, engineers need to be involved in the decision/policy making processes
- OSPE is an important organization to look at and support when it comes to advocacy and politics relating to the engineering profession.
- We don't lose anything by making people feel welcome

- An important part of getting good sponsors and keeping them is COMMUNICATION (before, during and after)
  - Good sponsorship package
  - Communication throughout the event
  - Communicating after said event to keep a relationship with the sponsor
- On being a mentor :
  - Can be active (very involved and personalized the mentee) or passive (you lead by example, less involved)
  - Set the positive example, give people chances, be confident and optimistic.
  - To develop your mentorship skills, it's a good start to learn your strengths, learn to listen and to help others learn about themselves.
- On functioning after a VP role:
  - Take notes on what you've learned (it will likely be more than you think)
  - Help out the new generations without encroaching on their space (letting them learn for themselves and lead in their own way).
  - Continue outreach in different areas of the engineering community, and move from engsoc while still participating in positive ventures ( BEST, high school outreach, etc) .
- How engsocs can branch out and be more inclusive
  - Planning non drinking events that are of the same caliber and with the same effort as a drinking event.
  - Make relationships with students in your classes and in the engineering buildings, it's more personal and encourages people to come out.
  - By building these friendships with students not normally involved, the ESS seems more approachable and strays from the elitist image we may usually have.
  - Time and location of events, as well as accessibility can greatly affect turnout.
- Taking the undergraduate experience worldwide
  - BEST, BONDING courses
  - Try to have a broader, more global perspective of what engineering is and what entails
  - Work internationally or go on an exchange

### **ESSCO PM 2018 (University of Windsor, Sept 14-16, 2018)**

The ESSCO President's Meeting is used to connect the different executive teams from member schools. Each school is invited to bring their execs to meet others in the same positions and share best practices. Typically the positions invited are Presidents, VP Externals, VP Internals or Socials, VP Finances, and VP Academics. The sessions are tailored to the specific positions and create discussions on problems each of the schools face. The ESSCO Council also meets to

discuss the upcoming CFES President's meeting and form a unified Ontario opinion. At this conference, delegates (mostly VPX's) attended sessions on many topics and different organizations that ESSCO partners with or works with.

Here are some key takeaways of the sessions :

- We reviewed last year's minutes from congress to prepare for CFES PM and went over some general info and guidelines for CFES
- Engineering Change Lab ( ECL ) did a presentation (testing out anew workshop) on Technological Stewardship
  - Technological Stewardship is the idea of becoming more complex in our ideas of doing engineering work
  - We need to think of what the impact of technology is, because we can have a good OR bad impact on society, so it's important to have these more "complex" conversations to address challenges of our time
  - Places to engage in Technological Stewardship would be Capstone projects, work terms, coursework, mentioning it to your prof to include in classes.
  - ECL is a fantastic organization to work with, and can bring very meaningful and useful workshops to the students.
- OSPE did a presentation about their organization, similar to the one at AGM
  - Students are encouraged to sign up for their membership, which costs 0\$ and provides discounts to many stores, resorts, websites, and more.  
([www.ospe.on.ca/jointoday](http://www.ospe.on.ca/jointoday))
  - OSPE also sometimes hosts events in Ottawa for students and graduated students (like job fairs, for example).
- OUSA ( Ontario University Students Association), which represents a smaller number of schools in the province (Compared to the CFS) did a presentation about their organization

### **CFES PM 2018 (University of New-Brunswick, Sept 27-30, 2018)**

The CFES President's meeting is an intimate gathering between the CFES Board of Directors, the National Executive, and members. Every Fall, this meeting brings together engineering student leaders from across Canada to discuss, engage, and share ideas and experiences. This meeting serves as an introduction to the CFES and a chance to deeply understand your role as a member and stakeholder of the organization, a chance to network with fellow engineering societies, informational sessions, and preparation for Congress.

Here are some key takeaways of the sessions :

- CFES PM didn't have any "sessions" per se, but focused on informing the incoming VPX's about the CFES, and sharing best practices.

- We had small working groups focusing on issues relating to engineering students such as gun control, mental health, and others
- Some working groups focused on new CFES initiatives and how the organisation can improve, as well as sharing our EngSoc's best initiatives
- We were updated on CFES affairs such as the budget and the direction the organization was taking for the year (which is shaped at this conference)

### **PEO SC 2018 (University of Ontario Institute of Technology, Nov 2- 4, 2018)**

Organized with the support of PEO, PEO-SC is a professional development conference that introduces delegates to the work of PEO and the benefits of obtaining a P.Eng license. Delegates are exposed to the licensing process and the PEO Student Membership Program, and have an opportunity to listen to speakers discuss the future of the engineering profession in Ontario. Delegates also get a chance to participate in activities that are designed to get the thoughts of students in regards to problems facing the engineering profession.

Here are some key takeaways of the sessions :

- Delegates received a presentation from PEO about licensing, new graduate opportunities, and the importance of having your PEO License
  - “A professional engineer can be described as anyone who plans, designs, or supervises work that incorporates the application of engineering principles and concerns public welfare. To become a licensed engineer, individuals must have 48 months of relevant engineering experience, have good character, and pass a professional practice exam (PPE). Students in the coop program can claim up to 12 months of pre-graduation experience, meaning they reduce the amount of time required post-grad to meet the licence requirements”
  - Law for Engineers (GNG 4170) is a good idea of what the PPE will cover
- PEO has a student program at : [www.engineeringstudents.peo.on.ca](http://www.engineeringstudents.peo.on.ca)
  - You can have access to articles and see what's going on in the community, better to join as a student because memberships cost money when you graduate.
  - OSPE did a presentation, again, similar to the ones at AGM.
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### **CDE 2018 (Ryerson University, Nov 9-12, 2018)**

The CFES is proud to offer the Conference on Diversity in Engineering (CDE) as a valuable service to its members. Previously known as the National Conference on Women in Engineering (NCWIE), CDE aims to develop knowledge surrounding the variety of individuals, cultures and perspectives found within engineering communities. CDE further aims to instill a notion of positivity and togetherness in creating spaces that value the differences between groups of engineering students and professionals.

Delegates will not only leave the conference with a solid understanding of the issues minorities encounter in the engineering profession, but they will also be equipped to appropriately address these issues to create a more inclusive and thriving community. Students attending CDE will have the opportunity to meet and hear from successful, interesting, and talented speakers prepared to share their experience and knowledge on how to embrace diversity in order to better address the complex, interdisciplinary problems of society.

Here are some key takeaways of the sessions :

- A big theme of this conference was the idea of Equality vs. Equity
- Failing Forward :
  - In school, it seems like our futures are determined by our successes and often, “ruined” by our failures.
  - Professional engineers fail too, and they fail in the real world. Driving success is so deeply rooted in not just engineering, but STEM culture that **we fail to realize that an undesirable result is a result nevertheless, and we can still learn from it.**
  - How to talk about failure :
    - Keep it short and succinct
    - Don’t play the blame game
    - Dig deep and focus on the failure
    - Don’t feel the need to make it a success story
  - How to be a good listener in these situations :
    - Don’t interrupt
    - Ask with empathy
    - Support, don't downplay
    - Focus on questions rather than solutions
  - Analysing failure :
    - Asking WHY
    - Look for trends and patterns
    - Articulate key learnings
- Many panels were held on people of different backgrounds in STEM:
  - Women of Color in STEM
    - Women of Colour in STEM will experience isolation
    - There is a power structure that you automatically do not get plugged into
      - do not get access to the best opportunities that the company does offer
    - Conscious bias - being aware of this bias and not allowing this bias to affect your decisions.

- Power structures within every single company - men will be pulled into the tiny gatherings or meetings, where women are going to be excluded for a variety of reasons, start to question why women or others are not invited to some of these gatherings.
  - Women should support each other in these scenarios
- Indigenous Peoples in STEM
- The prevalence of Oppression in Engineering
  - Streaming students at the high school level that will remove them from being able to succeed in post secondary programs (where they might even be a better fit)
    - Academic vs. applied high school courses
  - Mathematics is a powerful social filter
- Technological Stewardship Workshop from ECL
- There's diversity in mindset - we must challenge each other's opinions when creating solutions
  - Cross functional teams lead to much better solutions and more well rounded ideas
- The importance of building networking skills and learning or developing after graduation
- Building a powerful mind :
  - Focus on the engineer's mind - the human behind the engineering
  - Deal with failure - consistency (accept that it's part of the process)
  - Stress can lead to 3 different kinds of action
    - useful action
    - useless action
    - no action
  - Motivation vs. dedication
    - Motivation is a feeling, it depends on the day you're having
    - Dedication is a set of different habits and beliefs that are consistent
    - Dedication creates motivation
  - You don't have to be at the top in order to be successful
  - Learn from each other without trying to become each other

### **Final Recommendations**

Finally, here are my recommendations based on my current knowledge and understanding of other societies as well as information i have gotten at conferences :

1. We form a delegate committee to further encourage great candidates being sent while
  - a. Reducing some work and stress off the VP External
  - b. Ensuring that the picks are transparent, unbiased and relevant to the conference
2. Our society begins partaking in non-partisan advocacy work
  - a. It's good for our image because we are supporting great causes

- b. We set a better example for our students and encourage them to make changes in their own community or participate in advocacy work that they align with
- 3. Collaborate with more external organizations
  - a. ECL is an excellent organization that provides workshops and would be beneficial to associate with.
  - b. By collaborating with more organizations, we open the door to connections and sponsorship opportunities.

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Lots of this report was written using my delegate's notes :

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