



# Guelph Engineering Society



Report on CFES Congress at Macmaster University,  
January 2-8, 2010.

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## 1. Purpose of Conference

CFES (Canadian Federation of Engineering Students) congress is the annual general meeting for the federation. The main purpose of this conference is to elect the new executive and Board of Directors and to hold a plenary session to allow for policy making and to decide the direction of the organization for the next year. The conference also holds valuable sessions to allow engineering students from across Canada to share ideas and help each other better their undergraduate engineering societies at their schools.

## 2. Personal Goals for Conference

Please describe goals that you personally had for this conference. What did you hope to gain from this experience? What types of issues did you hope to gain insight on? What did you aim to bring back to Engineering at the University of Guelph?

As head delegate for this conference, I hoped to bring back as much information back to the University of Guelph that we could by having delegates attend all sessions as well as help make decisions about the direction of the CFES in the upcoming year based on my experience with the organization. One of the main things we wanted to learn was how to deal with the coming expansion at Guelph and how our engsoc will deal with a larger student population. I learned some interesting things about endowment funds and elections. I also represented Guelph students at the plenary session, bringing forth issues relevant to us when decisions were made. I also gained some personal development at the conference, particularly in being a leader.

## 3. Summary of Events

### Engineering Politics 101 – Howard Brown, PEO

- Average age of PEO council execs was 80 four years ago (now its around 60)
- GLP (government liaison program) → facilitate relationships between chapters and politicians; show that engineers have ideas and should be more involved in public policy → how many engineers are on the U of G CSA?  
Somewhere we should consider getting more involvement
  - o Goal of 27 engineers in 2027 legislature
  - o GLP.peo.on.ca
- Engineers = 7<sup>th</sup> most trusted professions (above lawyers, politicians)

- Put up list of MP's in Guelph engsoc office to get more involved
- Currently 6 engineers in the house of commons (6/307)
- Engineers and politicians are leaders and problem solvers, putting public good above all else

How students can get involved

- Join a political party
- Read the news paper daily
- Volunteer in the community and political campaigns
- Attend local chapter meetings
- Read engineering dimensions and Journal of Policy Engagement
- Go to events → one coming up hosted by Ontario Science Centre
- Write a letter and follow up immediately
- 2 ways to get into politics: get involved with student organization/PEO or through a party

Why choose public policy over engineering job where I make lots of money? Chance to make a difference and an exciting life; commitment is only 7 years

### **Engineering and Public Policy – Donald Wallace, Ontario Centre for Engineering and Public Policy**

Why engage in public policy

- Protect public interest
- Prevent situations that cause harm to public
- Ensure well-informed policies

How many MPPs are engineers? Answer: 2, no deputy ministers

Why more engineers aren't leaders?

- Education emphasizes technical and not broader skills
- Until late 20<sup>th</sup> century, engineering projects local in nature
- Speed of technological change impedes career transition
- Engineers' public interest role is unclear
- Engineers are solution-oriented; government is about process

Current challenges

- Increasing population, especially in Asia and Africa
- Development of countries

Get involved

- Learn how government works
- Build relationships with MPPs, DMs and ADMs

## Key Note Speaker Drew Dudley– What is Leadership?

- Easy to answer questions about things we learn in school, but hard to answer questions about what we believe in and want in life (the personal questions)
- School changes your mind from creative side to a storage mechanism
- The question why transforms into an A+ (the reward rather than self satisfaction)
- You can be good on paper but that doesn't mean you matter → marks matter only to you, what you do and relationships you form matter to others

## The Tao of Conduct Becoming

- Organizations afraid to make mistakes will never accomplish anything
- We learn from our mistakes and won't learn or do anything if you don't take the risk to make mistakes
- What you create as a final truth needs to be made up by the truths of many other people → creates good open-minded leaders, but this isn't how we are taught to act as children
- The map of the world is not proportional → most people don't look at it this way because we are not taught to think this way
- Man who created the map was from Germany → Germany is in the centre of the common map; leads to Europe centered ideas, makes Africa smaller
- Why is it oriented the way it is, why is North America up?
- Why don't we ever think to think about it differently?
- Have conversations with people who disagree with you
- Days as a leader are shades of grey → need to take in to account many people's ideas
- We treat life as a scavenger hunt, and all receive the same first card (list of a successful life) → it should be your own list, we weren't all handed the same card
- Tradition = it existed when the 4<sup>th</sup> years were first years → we need to look at which things matter and help the spirit of the university and what is bringing us down and only done because it's a 'tradition'
- If you are dying, make some noise so somebody can save you
- Its not the big things you do that change lives, it's the little things you did to achieve the big thing
- Leadership is caring about something and getting others to care about it too

## Engineers Canada and CFES - Chantal Guay, CEO of EC

- Created CELF (Canadian engineering leadership forum) 5 years ago with hopes to change the image of the profession and to learn what society expects from the engineering profession
- Engineers Canada tries to bring engineers together and make a difference in society
- Wrote a declaration at CELF → pursue greater collaboration between disciplines and professions, increase participation in policy making, reassess

- accreditation process, outreach to underrepresented groups (e.g. aboriginals) and women, transform engineering education and practice
- How to get girls in engineering? → WISE, Go ENGG Girl, Big sister program with high schools, make teachers and guidance counselors more aware of the profession and get them to encourage it more in high schools
    - Engineers Canada trying to map what schools do to encourage females in engineering, so we can be more efficient and work together rather than all the associations doing the same things (applicable to all the goals of the declaration)
    - Why women go into engineering because they don't see the caring for people aspect, something that draws girls → therefore change image to show how engineers contribute to society and help others by improving the quality of life
  - Need to show the world engineers are problem solvers
  - How do engineers work with other disciplines? Working on projects with students in other majors

### **Engineering Accreditation in Canada**

- Engineers Canada is responsible for accrediting university engineering educational programs
- Canadian engineering accreditation board consists of 15 volunteers all ing./P.Eng. from different disciplines and backgrounds across Canada
- If you graduate from an accredited undergrad program, you are eligible to become a professional
- Accreditation board invited by the university (not required/organized by EC); only undergrad programs get accredited and it's the program not faculty, profs, facility, etc.
- Benefits of accreditation are that the school meets the academic requirements for licensure, gives credibility to the program, gives advice to program, improvement of engineering programs, creates partnership between the profession and education communities

### New accreditation criteria outcomes and assessment

- Problems with the old criteria, moved to 'outcome assessment' because many other countries going in this direction
- Outcomes: statements that describe what students are expected to know and be able to do when they graduate
- Philosophy of new criteria is a hope to create a set of desired graduate attributes
- The institution sets objectives in consultation with constituencies
- Goal to ensure competent faculty and facilities

### Graduate attributes

- knowledge base
- problem analysis
- investigation

- design
- use of engineering tools
- individual and team work and more

#### Quality improvement loop

- if the observed outcomes are not consistent with desired attributes, system inputs and /or processes must be adjusted → therefore schools can independently adjust the attributes for their program

#### Changes to Licensing

- Criteria on faculty have more references to industrial experience, design practice and involvement in engineering publications and societies

#### Additions (with the changes)

- Accreditation board reserves the right to alter the accreditation status at any institution if it is discovered that an institution has breached any of the accreditation criteria regulations

#### Quantitative Evaluation

- Absolute measurement of curriculum content in terms of accreditation (one hour lecture = 1 AU; one hour of tutorial/lab= 0.5 AU → AU's are added to determine if you meet requirements)

#### Accreditation Visits

- At request of institution
- 2.5 day visit; entire accreditation cycle lasts 18 months
- By a team of senior professional engineers

#### Issues repeatedly identified

- Number of faculty
- Courses with engineering science and engineering design content not taught by faculty licensed to practice engineering in Canada
- Stability (student to faculty ratios)
- Teaching loads
- Professional aspects
- Lab experience
- Exposure to worker health and safety

#### Note:

- School does not need to have an engsoc to be accredited

#### NCWIE

- One issue: been Ontario centric so far, but has recently become national; hoping to get I moving across Canada and get speakers from other places

- Different than usual conferences (atmosphere, people it attracts) → focused more on personal development to bring back and make change at your school rather than giving you tools to implement at your school (like congress, agm, pm, etc)
- Important to look at women in the profession and preparing women for the challenges they will find in the work place (more prevalent there than in school) → how can we bring this aspect to be stronger in WISE groups

### **Accountability**

- IEC: we are not ready to start it in a sustainable manner to continue it, want to wait until we have a strong start to keep it going
- Song competition is on an indefinite hold
- [www.cec2010.ca](http://www.cec2010.ca)

### **Engsoc Elections**

- Waterloo candidates receive 50% of their campaign budget back (if they receive 10% of the votes)
- Paper ballot shift to online ballot increased voter participation by 20% at Waterloo → possible at Guelph? Maybe work with CSA and how they do it?
- Can run for positions two people as one and split the term (first half/second half) but run as a pair, both win or both lose...still trying to work this out. → good idea for coop
- Alberta once had 3 presidents at once! And it worked out really well (allowed in policy manual/constitution)
- UBC voting guidelines can change every year, one person (elections administrator) has position that decides this at beginning of the year; doesn't usually change though
- Online voting cost = less than \$500 at Queens (from their CSA)
- Survey monkey is \$300 a year
- Some people have problems getting a list of students to control ensure only engineering students are voting
- Most schools have a CRO for elections...who organizes our elections?
- Having a race for positions increases voter turnout
- How to get more people to run? Hound people, list of top 15 reasons to be on exec, public personal account for each exec for other students to read (more interesting and gives a better idea than the policy manual would)
- Sherbrooke has 3 different councils rotating every 4 months (but can run twice in a row if you want; allows coop people to get involved)
- structure your engsoc to grab people and make them climb the ladder to get more involved as exec (like Guelph does ie. Can't be VP unless been on engsoc before)

**\*\*NOTE:** it is the responsibility of the chair to know the constitution and policy manual and should be pointing these things out in meetings

#### **4. Evaluation**

**i) Conference Organizers**

*Overall, this conference was run very well. All sessions, meals and events were well organized and on time. There was confusion at times with changing of rooms, however, the conference organizers dealt with this well. It was nice that they found time to give tours of the university and the city facilities one morning, as it is always interesting to see other schools of engineering. Holding all sessions in the hotel saved a lot of travel time and made the conference run smoothly.*

**ii) Delegate**

*I think I performed well as head delegate at this conference. I was on top of the schedule, making sure all sessions were covered by all delegates to bring back all the information back to Guelph that we could. I was present at all sessions, and active in participating as well as took very good notes to ensure a good knowledge transfer back to the school. I learned some things at this conference about how other schools do things, such as their elections, that inspired me to look at how we can improve such activities at Guelph. I plan to take a look at our constitution and policy manual and propose some changes at the AGM to hopefully improve our society, and prepare it for the coming expansion. Attending this conference, I had a really good background knowledge of the CFES from attending their president's meeting in the fall and reading the monthly E-bulletins, which helped me to understand the federation and help make decisions for the direction of the CFES in the coming years. Overall, I think I represented Guelph in a positive light by showing others how our positive and friendly atmosphere helps our society stay connected with students and administration to achieve things.*