



# Guelph Engineering Society



Report on First Year Integration Conference at Lakehead University  
February 5-7<sup>th</sup>, 2010.

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## *1. Purpose of Conference*

The purpose of the First Year Integration Conference is to introduce first year students to engineering. It is hosted by an Ontario university and facilitated in partnership with ESSCO. The specific goal of the conference is also to get first year Ontario engineering students familiar with ESSCO and the CFES. As well, it is a great networking and bonding opportunity for first year to meet older students, and get to know other students in their year who they will be sharing experiences with in near future.

## *2. Personal Goals for Conference*

My personal goals for the conference were to familiarize myself with ESSCO and other organizations, network with other engineering students from across Ontario, exchange ideas about EngSoc and its role, and learn more about the engineering profession. I can confidently say that I achieved all of these goals during FYIC, and actually far surpassed them.

I learned a tremendous amount about ESSCO, its objectives, and the dedicated engineering students who are the executives of the ESSCO.

I have made many contacts with students from across Ontario who shared their experiences with me. I was very fortunate to have attended Congress because I was already well acquainted with the CFES and ESSCO, and executives. Unlike many other first years, I had the opportunity to have some in depth conversations with executives and other upper year students who I had previously met at Congress.

I was very eager to learn more about the engineering profession, and to confirm that I wanted to continue my education in engineering. This was probably the biggest impact that this conference had on me as a first year engineering student. I was sceptical about engineering because I was unsure of the opportunities that there would be upon graduation, but it was confirmed that there are endless opportunities for engineering graduates.

As a first year student, I gathered much knowledge about engineering societies and their role as an organization, engineering education, networking, and a broad scope of the engineering profession. I wanted to bring back information for first year students, upper year students, and information for Guelph engineering as a whole.

### **3. Summary of Events**

#### **ESSCO**

History of ESSCO

-24<sup>th</sup> year, it's birth date is November 21<sup>st</sup>, 1987

- it was formed by 13 engineering schools at Western

-Lobbied PEO for a student membership program

Representation

- 20,000 undergraduate engineering students represented across Ontario

- large communication network among schools and students

Outreach

- major focus on high schools and the community at large

Conferences

- ESSCO Presidents Meeting (PM)

- PEOSC

-FYIC

- ESSCO Annual General Meeting

#### **Professional Engineers of Ontario – Manoj Choudhary**

Engineering as a Profession – there are student memberships available at

[www.engineeringstudents.peo.on.ca](http://www.engineeringstudents.peo.on.ca), which is for Ontario engineering students. It keeps them updated on current issues about engineering.

-information about licensing and registration with accreditation information and admission criteria

OSPE – member organization; OSPE is the advocacy body where as the PEO is the regulatory body for engineers in Ontario. OSPE encourages students to get involved because it recognizes that an education is more than just academics; it is also about extracurricular involvement. It was recently reported by OSPE that employers are 87% satisfied with engineering skills, and 64% satisfied with non-engineering skills, which means that students need to be more involved in activities besides academics. OSPE also offers an online job portal for students who are searching for job opportunities.

Approaching Employers – it is very important to research a company before applying to work for it. It is crucial that you outline any non-technical skills that you possess along with any academic skills that you also possess; they are equally important. It is important to demonstrate that you are aware of the world. Be sure that you always follow-up on a position that you have applied for, and convey your skills in relation to what the company needs.

NEVER – ask what a company does, and don't ask if they have a job for you. Never ask about salaries and benefits or show attitude.

Be sure to analyze the job posting and discuss or show that you have knowledge and skills that pertain to the posting. For example, discuss your love for an old heritage.

#### **Engineering Responsibility – S.A. Mirza, Ph.D.**

Structural Engineering Design Codes- to protect public safety

Three Important Lessons

- Never lose sense of rationalizing
- Building codes are not the only guideline
- Don't be afraid to make and admit mistake

#### Engineering Iron Ring

- Represent the remains of the Quebec Bridge to remind us of the consequences of mistake

#### Design and Construction – Three Principles

- Firmitas (safety), Utilitas (utility), Venustas (grace, aesthetics)

#### The Principles of Engineering

- Safety, Responsibility, Economy and Sustainability, Aesthetics, Social and Environmental Compatibility, Quality of Interior Environment, and Durability

#### Conclusions

1. Practice engineering ethically, practically, and responsibly
2. Remember the consequences if you were to make a mistake
3. Keep in touch with common sense – one of the most important things you can do as an engineer

#### **Bombardier**

- Presentation by the mechanical engineer who designed the Toronto GO trains and the Vancouver Olympic Line, Canada Line, and Sky train.
- She is currently working on other designs for cities around the world.
- We learned about Bombardier as an engineering company. One of the largest bombardier factories is based in Thunder Bay, Ontario. However, there are Bombardier factories based all over the world.
- Bombardier is a great example of a very successful Canadian engineering company.
- Bombardier was also the engineering firm that designed the Olympic Torch. The torch was fuelled by propane and octane, and there were over 12,000 torches produced for the over 12,000 torchbearers. Mike, a Bombardier employee, was lucky enough to carry the Olympic torch in Quebec. Since he was a Bombardier employee, Bombardier allowed him to keep his torch. We were able to hold the torch, and get pictures taken with it.

#### **Engineering Landmarks in Canadian History**

- There are many Canadian Engineering Landmarks
  - The Confederation Bridge, Bombardier Trains

#### **4. Evaluation**

##### i) *Conference Organizers*

Personally, I think the conference was run very well overall. This was my second conference as an engineering student. In comparison to Congress, which was the previous conference I had attended, I do feel that it was a very well run conference. Some of the strengths of the conference were that it all took place at one very central location, which was very convenient for all activities, both day and night. Also, as a first year student, I felt that the conference was very well geared toward first year students. It really helped to integrate first-year students and acquaint them with engineering organizations. As well, the night activities were very well planned as they pertained to all ages, which is what it should have been since the majority of attendees were in fact not of legal age.

*ii) Delegate*

I am confident that my personal performance was what was expected of me. I was always on time for every, and I was more than willing to attend any that I was asked to attend. I tried my best to take very descriptive notes and participate in all discussions in order to benefit from the discussions. I feel that I represented the University of Guelph very well detailing what we do well as a university, and maintaining pride in my university. I gained a lot from this experience, specifically about engineering. Originally, I was skeptical about the profession, but this helped me confirm that this is what I want to continue studying. I believe that because I was interested to find out more information about engineering as a profession and the opportunities available to engineers, that I am bringing back a lot of information about engineering that I am more than happy to share with any students who are interested to know more about what I learned.

As I mentioned previously, I far surpassed the goals I had initially set for this conference. I learned a lot of very valuable information that I will now apply to my own education, but to which I will also apply to Guelph's engineering society, and engineering at the University of Guelph.

If I were to get another chance to attend a conference, I think I would prepare myself more than what I had for Congress or FYIC. I am more familiar now with the style of the conference and what is more thoroughly expected of me, so I feel like I will be more apt to perform. During the beginning I was slightly nervous to meet people and voice my opinions or become whole-heartedly involved in round table discussion, and I realized as the week progressed that to benefit from discussion, you must be a participant. Now, I am more comfortable that I had previously been to fully participate.