

engineering profession. I wanted to bring back information for first year students, upper year students, and information for Guelph engineering as a whole. As well, I wanted to return with information about events that EngSoc can facilitate, and events that will involve all engineering students.

3. Summary of Events

Student Spaces

- This was a round table discussion where each university discussed how they/their students utilized the space they were given in their engineering building
- Every university was looking for ways in which their space could be better utilized for the interest of their students

McGill

- Very poorly used space, so they use it as a Friday afternoon bar
- Computer labs are run by their engineering society
- They have student accounts, which can be accessed from home
- The purpose is to encourage students to become more involved with their engineering society

Waterloo

- Has a television to play shows to attract students to come to their lounge area
- They run a coffee and donut shop and this is where their funding comes from
- They also use it as a Thursday and Friday bar to allow for social interaction besides simply school-based activities
- They have a full-time secretary, and of their opinions or concerns with faculty are addressed through her

McMaster

- The lounge is open to all engineering students
- They try to make it a place that will foster interaction/relationships between all engineering students
- A lot of their fundraising comes from selling swag in their office

University of Saskatchewan

- Xbox, pool tables, couches, and other activities in their lounge to encourage students to interact outside of academics

University of Western Ontario

- Wanted more information about starting a "textbook library" for their students in their EngSoc office

Carleton

- Has a textbook library in their office, which is all computerized so that students can sign out textbooks for a given amount of time and then return them
- There are penalties for late books, ie. their grades are put on hold
- Books are donated or they are bought by the library
- Their library is run by their EngSoc, so people who are on their office hours or executive council

Queen's University

- Queen's uses the space they are given as study rooms for their students

- They have an online booking for group study rooms, so that students can reserve them in advance if they need a place to study

Ryerson

- They have security monitoring their lounge because it is a public space, and things can get out of hand at times
- They want to try to control safety, and it also tend to be very loud, so they want to control loudness, so that students have a place to study

The most important thing that I learned from this session:

- Lounges should create a sense of belonging for all engineering students
- It should be a gathering space, and a space to hold different events (academic and social)

Diversity

- I noted that it seems that every university has issues with diversity
- The issues mainly tend to be about making exchange or foreign students feel welcome in engineering and to Canada
- Many schools are dealing with issues of feminism, homosexuality, and international students in engineering

Carleton University

- Sets aside funding specifically to run activities geared toward the integration of international and homosexual students in engineering
- They have also made engineering swag in a number of different languages, ie. Arabic and Chinese. As well, they hold discussions with international and homosexual engineering students to ask them about the services that they would potentially like to see made available to them

University of British Columbia

- Working to update all of their student services, and they are striving to ensure that every student has access and feels comfortable utilizing their services
- They use the six hat approach to decision making, to ensure that they have analyzed of an issue before they agree upon a final decision

Engineers Canada

- They represent engineers nationally and internationally
- Dealing with issues of diversity, specifically women in engineering
- They have created a women in engineering task force
- Promote information sharing, so that engineering firms and schools have access to needed information, and for ideas of how firms and schools can deal with diversity
- It has been noted by the organization that retention is a problem within the profession, specifically there has been a decrease in the number of females, and they feel is a big concern for the profession
- The most common engineering disciplines for females are civil and mechanical, and the least popular are electrical and computer
- They have confirmed that females are more likely to complete grad school than males, and they want to increase the number of females in engineering

Indigenous People

- this one issue brought up by many universities; each university is concerned with providing services to its indigenous students
- however, at this point, most universities are looking to increase their indigenous population, and attract these students to study engineering
- many universities are looking into supporting schools on reserves because as it stands, the students in these schools have very limited access to sufficient math and science education to prepare them for engineering
- ideas are to get funding or hold symposiums for these students to encourage them to study engineering

GE Sustainability in Healthcare

- GE has challenges that it faces as a corporation, since it is one of the largest healthcare equipment providers
- The current challenges they are facing are: sustainability, to reduce cost, improve quality, and improve access to healthcare for all Canadians
- Their objective is to work with the healthcare system to move from disease management to disease prevention
- Access has become a huge issue in the Canadian healthcare system; wait times, access to physicians, geography, information, and home care are all current factors in the healthcare system

GE is currently working on nine initiatives to improve healthcare in Canada:

1. Miniature/Portable Technologies
2. Fusion Technologies
 - ultrasound fusion with MRI and CT scans

3. Precision Diagnostics Guide Therapy

- Engineering technology that enables earlier and more precise diagnosis, specifically for oncology and cardiology

4. Providing Remote Healthcare Technologies

- GE has a vision: empower every person to live independently and confidently through connected technologies

5. Healthcare to Reduce Variation

- Producing electronic medical records, personal healthcare records, and advanced decision support tools through the sharing of best practices across institutions

6. Green Healthcare Facilities

- Minimize waste, environmental impact, and operating costs
- Improve quality of life inside the hospital for both patients and staff

7. Sustainable Facility Design

- New facilities are bigger, nicer, but less efficient in delivering care to patients
- Large rooms needed for equipment, and it has been noted that single rooms provide better healthcare for patients

GE Hospital of the Future Methodology

8. Sustainable Leadership

- Working to develop much more effective hospital leaders that will make more appropriate decisions in the interests of patients and healthcare providers

9. Hospital Productivity

- One of GE's biggest initiatives is to reduce waste produced by hospitals, and to be more productive with their available resources

To summarize this session:

- To improve collaboration across hospitals and healthcare facilities
- To think in terms of the bigger picture
- Turn the focus to cost, access, and quality
- Innovations that are developed anywhere, can be shared globally
- To create partnerships with corporations, hospitals, and countries

Accountability

- The session on accountability discussed the roles of CFES executives

- Each executive was given time to speak and they went through what they had done over the course of their as a CFES executive

- Many suggestions were made during this session because there were some instances that pertained to executives who left part way through their term, which others who had previously run for the position felt was very unfair to those who would have done a good job in the position

- I personally found this session very useful because it introduced me to the 2009 CFES executives and their role in the CFES. As a first-year student, I found this information to be very useful for future in case I or another engineering student from Guelph was interested in any executive positions.

Engineering Accreditation in Canada

-Created by engineers in 1965 from a range of disciplines, and it is still run by 15 volunteer engineers from across Canada who practice in a variety of engineering disciplines

Objectives

- To accredit undergraduate engineering programs across Canada

- To be an advisory panel for universities during the creation of new engineering programs, and to advise Engineers Canada of issues amongst engineers or in engineering

- They assess the equivalency of international engineering programs to determine whether or not an international education is acceptable for practice in Canada; currently there are over 250 accredited engineering programs in Canada

Accreditation

- The purpose of accreditation is to produce graduates who fulfill the requirements, ie. have the required training to obtain their licensure and practice as professional engineers in Canada

- The Accreditation Board is invited by universities for review of their specific program, and the cycle lasts about 18 months, where there are numerous visits to the university by senior professionals to assess the program. They follow the “Outcomes Assessment” process to evaluate programs
- Outcomes- What should a student know or be able to do upon graduation? That is the fundamental question behind accreditation.
- The accreditation criteria are revised annually, which is thoroughly revised by Constituent Members, Deans, and other senior professionals
- Major Changes to the Criteria
- The board has defined 12 graduate attributes, each of which is aligned with the Washington Accord
- Increase in Accreditation Units, which are used to determine if a program qualifies for accreditation
- Licensing criteria has been strengthened
- No longer called a “Bachelor’s degree”, the formal title is an “Undergraduate Degree”.
- The Board now has the right to revoke a program’s accreditation status at any institution at any time
- Major Issues Identified at Previous Accreditation Board Meetings
- Safety in laboratories, quality of student labs, and the age of lab equipment
- The number of faculty available to students
- The number of courses that are shared by science and engineering students to ensure that engineers have courses and applications that are directed to engineering applications
- Accreditation Decisions
- A program only remains accredited for six years and then the process must be repeated to re-establish accreditation

National Conference on Women in Engineering

- This year NCWIE was held at the University of Toronto
- The conference was well done, but there was much room for improvement
- NCWIE has only recently become a national conference, which occurred when it became part of the CFES
- It has mainly been an Ontario based conference, which is a problem because it is a national conference, so the goal in upcoming years is to get the conference out of Ontario and to other regions of Canada
- The goal of the NCWIE conference is to target individuals in engineering and help them to better themselves as engineers; it’s about improving yourself in the career
- Many of the guest speakers who speak at NCWIE are generally from the area, but for upcoming NCWIE events, they want to try and gather speakers from across Canada and from a wide variety of organizations and careers
- One large issue brought up during the session was that the conference is intended for both men and women to attend, but men feel very unwelcome at the conference because it’s main focus is on how the treatment of women in engineering can be bettered. A suggestion that was brought up was to change the title to “National Conference on

Gender in Engineering” to encourage men to attend the conference, and also to address issues that affect both genders, not simply females.

Canadian Federation of Engineering Students Branding

- This session dealt with amendments to CFES branding
- Rules have been developed as to letterhead, logos, emails, business cards, photographs, presentations, and the website to deem what is or isn't acceptable.
- Since the CFES is a professional organization, it is expected that it will be respected as a federation by all of its members

Logo

- Logo must only be represented in one colour or possible colour schemes
- Logo variations are permitted with various written statements
- Story of the logo – the 13 teeth on the gear represent the unity of the 13 Canadian provinces and territories

Letterhead

- Letterhead must be used for all CFES mailed items and official document
- Only a font deemed acceptable by the federation may be used for official documents

Presentations

- All presentations must be created using the official CFES power point template, and in both official languages

Website

- Is the official location of all current information, and it must be presented in both official languages

Social Networking

- No official presence with any networking sites such as Facebook or MySpace
- However, there has been consideration given to Twitter since there are many large corporations and organizations on there, which may help with promotions and recognition

Email

- All emails from officers must be in both official languages
- Signatures must be present at the end of all emails
- CFES email should not be used unless it is official CFES material

Business Cards

- All executives must have business cards, which are to be printed on an official template

Photographs

- Photos must be appropriate and contain no alcohol because they are representative of the CFES

CE Courses

- The biggest question posed is: Why host or attend a CE course? The answer is simple. CE courses help engineering students to gain experience, manage a team, make contacts, make a lot of new friends, learn communication skills, and gain leadership skills.
- Examples of previous CE courses are Sports, Building Career Skills, Nanotechnology, and Biomedical Engineering.

- If you are interested in hosting a CE course, talk to a CE commissioner, have a topic or a preliminary idea, and make a proposal to a commissioner.
- The CFES has numerous resources available to students who are interested in hosting a CE course. They have the resources to help find sponsorship.
- If a school is interested in hosting a CE course, the most beneficial CE courses for the delegates are courses that only have about 20 participants, so that all participants benefit fully from the experience.

4. Evaluation

i) Conference Organizers

Personally, I think the conference was run very well overall. This was in fact my first official conference as an engineering student, so I have no previous experience like it to compare it to, but I did 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. The day activities that were well planned and allowed for a lot of round table discussion between schools to discuss many issues that many delegates were eager to discuss. Also, as a first year student, I felt that the conference was very well geared toward delegates who had never attended, so it was relatively simple to become acquainted with the conference and other delegates. As well, the night activities were very well planned as they pertained to all ages, except for one night, which meant that delegates who were not legal were left behind every night.

Some of the conference were the way the eating arrangements were set up. I know a lot of delegates complained about the quality of breakfast relative to how early it was because lunch was not served until later in the afternoon. Many delegates were annoyed and found it difficult to sit through long sessions because they were hungry.

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. 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.