Key Agenda Items - Meeting Minutes

Saint Joseph Scholarship
Discussion
-SJ Scholars Class of 2018 is the smallest class and lowest yield to date (12 offers, 4 accepted)
-SJ Scholar offers were $7,500 for Class of 2018 as compared to $10,000 for previous classes, due to limited funds
-Need clarification on targeted students, several members were confused if the target was African American only, or all URM etc.
-Need clarification on what the scholarship rules are from Financial Aid

Biomedical Engineering Update
Discussion
-Final implementation plan due this fall from Keeling and College. Report will be shared with Council.
-Purpose is to have a major impact on the world in healthcare in alignment with our mission, to respond well to student demand for the major, to continue to improve the percentage of women in engineering, to help increase our external research funding, and to improve our commercialization opportunities in healthcare.

Internships
Discussion
-As most have probably seen, Tim Connors was referring to Greg Crawford’s new position as Associate Provost and will be based in Silicon Valley. This is good news for improving Notre Dame’s recruitment and engagement in California
-Challenge to the Council to assist the College by using their personal networks to help identify and provide internships
-Issue with Career Center taking credit for internship placement of many students when students seem to be getting them on their own
-It was suggested a ‘Job Exchange’ just starting within the College would be a good place to begin
-Need better data from the Career Center

Chemical and Biomolecular Engineering Report (Dave Clarke)
Discussion
-A CBE unit operations lab ‘pilot plant’ is needed to give the students more hands on experience with standard industrial processes and equipment. Bob Schleckser and his brother have made an outstanding commitment to help us with the equipment needed for such a laboratory. We are currently working on space.
-Size of classes is an issue, both in the classroom and the lab
-Great news on scholarships for summer travel, lab time, and job placement
-Graduate students are not ingrained with ND culture and some would prefer more teaching opportunities and social/collaboration opportunities
-Placement of students in internships and jobs is a challenge, as in some other programs
Computer Science and Engineering Report (Zack Capozzi)

Discussion
- EG 111 much better, but MatLab is not sufficient programming experience. We need a 2nd semester first-year programming course (such as Python, Java, C++).
- Preparedness for interviews is an issue, as many students lack the confidence necessary when talking with companies.
- There are mixed career and curricular interests among our students; about half the group has broad interests in computer science and the other half has very specific programming/software interests.
- Students are very enthusiastic about Hackathons, mobile app development and other project-based programming opportunities and competitions. Such experiences give them confidence, experience, and facilitate their engagement with some of the most sought after companies in the country.
- Job placement, salaries, internships are all considered strong points right now.

Aerospace and Mechanical Engineering Update (Tim Steigauf)

Discussion
- PhD candidates would like to be able to earn a Master’s degree on their way (this seems relatively easy to address, and is done already in other programs).
- Graduate student culture is very strong.
- Need to promote the Fundamentals of Engineering exam to students. Since it has been privatized, participation is way down. We have already begun to address this. NCEES (the professional organization that administers the exam) seems very interested in having Notre Dame host an examination site.
- Need to promote and market the AME graduate program externally as this is a top program and not a lot of students and companies are aware of this.

Civil & Environmental Engineering & Earth Sciences Update (Dave Sheehan)

Discussion
- Great diversity in their research work and some really unique projects (integration of science and engineering).
- EG 111 too ME focused.
- Need internship and job assistance (as do other programs).
- Need bigger lab space and design space, especially for students clubs. We are currently working on this and will report on this soon.

Electrical Engineering Update (Pat Toole, Jr.)

Discussion
- LEAST is the crown jewel of the department’s research program, but overall research is up and class size is good.
- EE is losing two star faculty members and will need to replace them with top quality. We have identified two world class endowed chair candidates in EE and are beginning to recruit them. We are also identifying several others, should the recruitment of these two not pan out.
- Need to promote what EE’s can do for a career, as some undergrads seem lost for opportunities.
- 50% drop in graduate student applications from China.
Notre Dame
College of Engineering
Advisory Council Meeting
August 28-30, 2014

- Need real EE courses earlier in the curriculum (nothing in first year)
- Need internship and job assistance
- Calc 3 students are gaming the system by attending the classes taught by the best teacher, which overcrowds the class

Other
- Mike O’Sullivan inquired about the College’s efforts to implement technology in teaching. The College is working in a couple of separate areas (current on-line and hybrid efforts as well as an on-line MS in ME program) and could use some Council help in deciding on implementation.

Key Agenda Items – Action Items

1. (SJ Fund) Leo McWilliams to get answers from Financial Aid and prepare a revised SJ Scholarship program description that includes intentions, goals, and financial needs. The intention of the fund has always been to bring in the best and brightest engineering students throughout all the underrepresented minority population segments.
2. (Biomedical) Draft implementation plan to be shared with Council this fall (likely in November). ‘Go’ or ‘No Go’ decision to be made by end of calendar year. Assuming ‘Go’, academic approval process to start in 2015.
3. (Internships) Bob Cunningham offered to aggregate Internships opportunities if the Council will send them directly to him. Also, the College has recently begun a project to create a new database on the INSIDE ND portal. An undergraduate engineering portal already exists, so this would just be an addition. The College is also considering adding a new full-time position to handle internships and research opportunities for undergrads.
4. (CBE) Great news – due to the generosity of Bob Schleckser, we are working on a design and plan to build a new lab in the near future.
5. (CSE) Partner with Four Horseman Society to provide more opportunities for students to participate in things like Hackathons.
6. (CSE) Add a first-year, second semester elective programming course for CSE students. This has been done and will be taught in January 2015 by Pat Flynn.
7. (AME) Gretar to look into Master’s option and benchmark other programs.
8. (All) FE exam is being looked into for more than just AME as the numbers are alarming (College wide the drop is from 30% taking exam down to 10%. In Civil alone the drop was from 85% down to 20%).
9. (All) Jack Remick, on behalf of the Engineering Council, will write a letter to Provost Tom Burish encouraging him to consider using one of the vacated buildings on campus (we are considering Bond Hall and Haggar Hall) as a result of Campus Crossroads and other building projects as an experiential learning facility for the College of Engineering, to include design, the new Schleckser laboratory, the Baja Club, a rapid prototyping lab, and other needs.
10. (EE) Dean’s office to look into the Calc 3 issue
11. (EE) Tom Fuja to consider adding EE courses earlier, perhaps an EE-specific section of EG 111
12. (EE) How will EE address the career opportunities issue?
13. (Other) Mike O’Sullivan to head a task group that will consider the issue of implementing technology in teaching.