College Council Meeting  
Date: March 21, 2014  
Time: 1:00pm  
Location: Eccles Board Room

Minutes approved by the College Council Chair on June 19, 2014.

Council Members Attending:
Tim Ameel- Chair, Mechanical Engineering  
AK Balaji- Senator, Mechanical Engineering  
Michael Barber- Chair, Civil & Environmental Engineering  
Richard Brown- Dean  
Milind Deo- Chair, Chemical Engineering  
K. Larry DeVries- COE RPT Advisory Committee, Mechanical Engineering  
Eric Eddings- Associate Dean of Research  
Tom Henderson- Senator, School of Computing  
Robert Hitchcock- Senator, Bioengineering  
Peter Jensen- Senator, School of Computing  
Evert Lawton- Senator, Civil & Environmental Engineering  
Feng Liu- Chair, Materials Science & Engineering  
Meredith Metzger- Senator, School of Computing  
Ajay Nahata- Associate Dean  
Rick Rabbitt- COE RPT Advisory Committee, Bioengineering  
Raili Taylor- Graduate SAC Representative

Council Members Absent:
McKay Allred- ASUU Student Representative  
Orly Alter- Senator, Bioengineering  
Monica Heaton, College Council Secretary  
Tatjana Jevremovic- Program Director, Nuclear Engineering  
Robert Kessler- Program Director, Entertainment Arts & Engineering  
Gianluca Lazzi- Chair, Electrical & Computer Engineering  
Marc Porter- COE RPT Advisory Committee, Chemical Engineering  
Ken Stevens- Program Director, Computer Engineering  
Patrick Tresco- Chair, Bioengineering  
Ross Whitaker- Director, School of Computing

Others Attending:
Cindy Furse, Associate VP for Research  
Jim de St. Germain- College Curriculum Committee Chair  
Michael Hoepfner, Assistant Professor, Chemical Engineering  
Mike Kirby, Associate Director, School of Computing  
Janna Nelson, Assistant to the Dean  
Aditi Risbud, CLEAR Director  
Bryan Ritchie, Associate VP, Tech Venture Commercialization
WELCOME
Dean Richard Brown opened the meeting with the following remarks:

New Degrees and Certificate Programs:
New degrees and programs were reviewed, including:
Entertainment Arts & Engineering
Big Data
Data Center Engineering
Petroleum Engineering
Nuclear Engineering

College of Engineering Vision:
Bring the quality of teaching, research and service to a level comparable to that of the best engineering schools in the world.

Strategic Objectives:
– Grow the Research Enterprise
– Assist faculty in Career Development
– Increase Diversity among Faculty and Students
– Improve Quality of our students and Number of graduates
– Strengthen Academic Experience and Climate
– Increase Technology Transfer
– Nurture Alumni Relationships
– Improve College Recognition

Academic Analytics:
Academic Analytics is a new tool that is starting to be used at the university. It is an enterprise-wide system that combines large data sets, statistical techniques, and predictive modeling. Ruth Watkins is very excited about it.

Dean Brown showed reports from Academic Analytics for one of the departments. Data is looked at in a multi-dimensional view. The department is the outer shape/color that is overlaid on the darker shape inside, which represents the average for that metric of peer institutions used in the comparison. We want to be far outside the average. This graphical approach is an interesting way to look at faculty performance relative to their peers. Training on the use of this tool is going on this week.

Rankings:
Rankings from US News & World Report were reviewed. According to the US News Academic Rankings, the university overall stands at 85th in the world. In Engineering, the university ranked between 76-100, and Computer Science ranked in the 52-75 range.

The University of Utah was ranked higher this year in the Times of London World University Rankings. The university ranked 89th in Engineering, including Computer Science, and 34th among universities in the US. According to the Princeton Review, our Entertainment Arts & Engineering program for undergraduates ranks 2nd, and the graduate program, 4th.
In student enrollment, The University of Utah College of Engineering has been a national leader in growth. In the past ten years, Engineering has more than doubled the number of PhD students and Ph.D. graduates. Since 1999, the College of Engineering has doubled the total number of College of Engineering graduates. To celebrate, Mike Levitt will be coming to speak at ENAC. He challenged us to double and then triple to number of graduates.

The following metrics were used to show student body growth in the college:

<table>
<thead>
<tr>
<th>Student Metrics</th>
<th>2003</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Engineering Freshman (OBIA)</td>
<td>223</td>
<td>423</td>
</tr>
<tr>
<td>Ave. Engineering Freshman ACT (OBIA)</td>
<td>25</td>
<td>27</td>
</tr>
<tr>
<td>Number of Women Undergraduates</td>
<td>250</td>
<td>513</td>
</tr>
<tr>
<td>% of Undergraduates who are Women</td>
<td>12</td>
<td>16</td>
</tr>
<tr>
<td>Number of Minorities (H, AA, NA)</td>
<td>89</td>
<td>271</td>
</tr>
<tr>
<td>% of Undergraduates who are Minority</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Ph.D. Students Enrolled</td>
<td>270</td>
<td>591</td>
</tr>
<tr>
<td>% of Graduate Applicants Accepted</td>
<td>44</td>
<td>37</td>
</tr>
<tr>
<td>% of Accepted Students who Enroll</td>
<td>30</td>
<td>45</td>
</tr>
</tbody>
</table>

In addition to student growth, the college has had significant growth in tenure track faculty. Over the last ten years, we have grown our tenure track faculty by 47%.

The following metrics were used to show faculty productivity:

<table>
<thead>
<tr>
<th>Faculty Metrics</th>
<th>2003</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conference Papers (FAR data)</td>
<td>157</td>
<td>365</td>
</tr>
<tr>
<td>Journal Articles (FAR data)</td>
<td>241</td>
<td>452</td>
</tr>
<tr>
<td>Faculty in National Academy of Engineering</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Number of Women Faculty (TT &amp; Lec)</td>
<td>11</td>
<td>27</td>
</tr>
<tr>
<td>% of Faculty (TT &amp; Lec) who are Women</td>
<td>10</td>
<td>16</td>
</tr>
</tbody>
</table>

Research expenditures in the college have grown from 25 million to 81.5 million. Expenditures in 2013 were down by $2.3M due to sequestration.
The metrics play a role in college rankings. With our new PR group, we have made excellent progress in national visibility.

**CLEAR**

Aditi Risbud presented an update to on the CLEAR Program and on instruction.

**Building on the foundation:** Current CLEAR model in most departments embedded CLEAR TAs in lab classes. The results were examined based on feedback from department chairs, faculty, students, and Industrial Advisory Board members.

**CLEAR Moving Forward:** The CLEAR program is moving to a permanent instructor model starting Fall 2014. Some departments will start a little later. We are currently hiring 4-5 associate instructors with engineering backgrounds and strong writing skills in lieu of teaching assistants. Undergraduate students will learn technical writing and presentation skills in a stand-alone course tailored to their specific discipline. A graduate technical writing course (focused on writing a dissertation) is also being offered.

An undergraduate pilot course was taught in ECE, spring 2014: Technical Writing and Communication for Engineers. It is a 3 credit hour class that meets the upper-division writing requirement.

Topics included:
- Professional communication
- Writing structure
- Oral presentations
- References
- Career preparation

A graduate course was piloted in ECE, fall 2013: Technical Writing and Communication for Graduate Students. This was a 2 credit hour class with specific research-based projects. Projects included journal articles, proceedings papers, dissertation chapters, conference talks, qualifying proposals and dissertation defense presentations. There were 46 students enrolled, including students from all engineering departments, as well as chemistry and geology. Class feedback called for more one-on-one time with the instructor on writing.

**Continuous Improvement:**

Student outcomes are measured through:
- Independent evaluation vs. internal evaluation (or both)
- Testing before/after coursework
- Success in real situations (e.g., senior design project)

This program was deemed something we need to scale-up. The intent is for instructors to teach fall, spring, and summer.

Feedback and considerations are always appreciated.
TECHNOLOGY VENTURE COMMERCIALIZATION

Bryan Ritchie provided a report of changes in policies related to intellectual property agreement and commercialization at the U.

The University of Utah does commercialization well, but we have a long way to go. Only about 15% of all TTO’s are profitable. In 2006, Michael Young changed the commercialization focus to startups. The University of Utah has been very successful in startups, but that is just a first step.

TVC wants to partner with the faculty to move forward early technologies and grow value in the startups. TVC is taking $1 million of retained earnings that come back to the University Research Foundation and putting it into new ventures. They refer to the process as “THE ENGINE.” Engine funding is available to all faculty and companies with U technologies. The Engine is a process of discovery and validation. It will identify milestones and help to mitigate risk. It will manage resource allocation and accountability. It is process and timeline driven. It will help with documentation, stage gates, and funding requests.

The Engine committee panels are scheduled to meet every 8 weeks to look at projects. Panels of peers then go to outside investors to see if there’s a market. TVC will meet with faculty within 14 days after disclosure. They will then do initial analysis and reconvene in 12 weeks with full analysis. TVC will help de-risk projects by connecting with commercial-sponsored research. The Engine will create mentoring relationships between investors and companies in their early stage. They will bring a full team to show who is working on marketing, funding, etc., that add value. It will provide faculty and companies with a roadmap.

TVC’s commitment is to be responsive and transparent and drive levels of trust up. Their final commitment is if we can’t do something with it, we will sign all the rights back to you. We will be honest with you if we feel it is not patentable. Have heard concern over new intellectual property agreement. TVC is looking to partner with faculty, not beat them up over compliance.

COLLEGE RPT ACTIONS

Larry Devries provided a report on the College RPT Actions and schedule for the upcoming year. The College RPT Committee work is dependent on how well the departments do their work. RPT actions, calendar and guidelines are available on the college website through the faculty login.

Department RPT Reports are due to the college on November 3rd.

ACADEMIC SENATE REPORT

Robert Hitchcock provided a report on current and major issues addressed by the Academic Senate.

Budget: President Pershing presented the base budget for the University of Utah. The overall budget for the University is $3.3 billion, with 7.8% ($289 million) coming from the State of Utah. While the percentage from the State looks small, it covers most of the salaries for faculty and staff in the academic units at the University. The large budget of the hospital, and a large research budget, make the state contribution look smaller.
Retention: Data provided by Dr. Watkins shows our undergraduate student retention rates for the freshman year to sophomore year is in the top half of the PAC-12 rankings. The four-year graduation rates for the University of Utah are not as high. The biggest reason for this lower rate is the majority of the U’s students are working adults. The U is working on ways to help these students graduate faster.

ASUU: ASUU reported concern for student well-being and campus climate. Elections were recently held for new student officers.

Academic Calendar Changes: The topic of eliminating Spring Reading Day was debated among the Academic Senators, which resulted in the formation of a separate committee devoted to studying its effectiveness. Spring Reading Day has been eliminated for the 2014 semester, and will be re-implemented for Fall 2014 and Spring 2015 semesters (according to the task force). Once further study has been completed, if a similar change is to be proposed for future years it will have to return to the Senate.

SAFE Campaign: The “Sidewalks Are For Everyone” campaign is currently a big issue and will be further discussed in upcoming meetings.

RESEARCH REPORT
Associate Dean Eric Eddings provided a report on what’s happening in research.

Funding: The ASEE Research Engineering Council heard from various federal agencies the previous week on funding for the upcoming year. The proposed budget for next year is looking favorable for science and engineering in terms of research. NSF is preparing to bump up the amount of funding for graduate fellowships. The various presentations from these organizations will be compiled and made available on the college website for others to view.

A tool is being developed to help faculty find RFP’s. It should be available this summer.

CLEAR GULF: CLEAR GULF is a large joint industry consortium located in Houston. It is currently dealing with environmental and operational issues associated with off-shore drilling, and is looking to partner with public and private research institutions by getting groups of faculty involved.

OUTREACH REPORT
Associate Dean Ajay Nahata reported on what’s happening in outreach and an update to any academic issues.

ABET: ABET going well. Review is later next year, 2015. This fall we will be holding several meetings, which will include Industrial Advisory Boards and faculty. Overall progressing as well as it should be.

Academic Issues: Physics has been conducting labs and exams on days and times when classes are not scheduled. Introductory Chemistry has associated labs that are conflicting with
Engineering courses and becoming a serious issue. We are working with the College of Science to try and resolve the issues.

Incoming Freshman: The college is holding an awards reception for incoming freshman scholarship awardees. This event is largely a meet-and-greet. Department faculty will be asked to attend in order to encourage students to want to come here.

CURRICULUM COMMITTEE REPORT
Jim de st. Germain provided a report from the Curriculum Committee. He reminded departments that all changes to degree requirements must be processed through the Curriculum Committee. You shouldn’t anticipate any problems in the process. It is to insure that University requirements are being met.

Departments need to coordinate instruction of shared courses. Department Chairs may have to work to resolve issues related to teaching.

Fees: Everybody is looking to charge student fees. Honor students are going to have to start to pay a fee to be an honors student. Same with business students. The committee was wondering when engineering is going to demand fees for what we do?

Career Services:
Dean Richard Brown indicated that the college has had a big discussion with Career Services. They were upset that we created a job bulletin website for engineering. There has been discussion about whether or not it would be worthwhile for us to run our own career services. Many students and departments showed dissatisfaction with the current services provided.

As faculty, we should encourage students to get connected to career services. Diane Ward has done a good job for ME. Last year, Career Services brought in a new person to work with graduate students, Francine Mahak. We provided funding (18.5K) to pay our share. Over 119 students have worked with Francine. How is the graduate counseling going?

Many responded that this is the first time they had heard about it and asked if Francine could come to department faculty meetings.

Raili Taylor commented that Francine met with the Chemical Engineering Grad SAC but she was too busy. She had them contacting companies themselves.

GRAD SAC ACTIVITY REPORT
Raili Taylor gave updates on various departments and what they are doing. Chemical Engineering is having a major problem with getting people involved. Computer Science and Bioengineering are doing well. For 2014-15, Grad SACs wants to try more college-wide activities.

WOMEN STUDENT AND FACULTY SURVEY
Cindy Furse who is Chair of the Women in Engineering Council, provided a survey summary from women engineering faculty. The survey indicated that we are doing a few really great things but there are a few areas in which we can do better.
Dr. Furse encouraged department chairs to have women faculty talk with Women in Engineering Council members, particularly after informal reviews.

Women engineering faculty are also becoming mentors to female students in engineering. The mentors are volunteers. It helps women, both faculty and students, who have problems with gender issues to have another women to talk to.

Faculty are encouraged to tell female students to sign up for the WIE Program, especially grad students.

There are several good links available to assist you in interviewing women faculty candidates. See info on website.

Dr. Furse also summarized the climate survey conducted by Maryann Berzins. Overall, the survey found the University to have open dialog with faculty, chairs, and deans. In particular, there was a strong sense of support from all colleagues. More mentoring was desired, but favorable where it exists formally. In general, the University has a respectful environment and is receptive to new ideas (not just including respect to females).

Comments from the survey on areas to be improved:
Women faculty would like a leadership commitment to enforcing a respectful environment, particularly addressing disrespectful, dominating behaviors at department meetings.

There needs to be more transparency in service loads, performance expectations (bonus structures), RPT, salary equity (Gender, USTAR), resource allocation (startup offers, space, special funding).

Departments are encouraged to formalize structured mentoring. Pediatrics currently has the best-structured mentoring on campus and could be used as an example for how to set up structured mentoring in other areas.

There is a perceived lack of support or interest for undergraduate education and the perception that women are more commonly placed in larger introductory classes with associated low perceived value.

It was announced that Engineering now has a mothers room for students and faculty next to the restroom on the 2nd floor of MEB.