Announcements/Updates

**Engineering and Science Career Fair**
Stan Inman and Jessica Mitchell from University Career Services spoke to the Committee regarding a Career Fair specifically for engineering and science students. Tech employers are interested in participating in a career fair of this type as they feel it would give them an opportunity to better connect with these students. Career Services currently holds two professional fairs on campus, one in the spring and one in the fall. Because of student and employer interest, there will now be one fair targeting engineering and science which will be held in early October. Another fair will continue to be held in the fall which will focus on business, liberal arts, etc.

Career Services has organized a Tech Career Fair Committee. Jolie Coleman will be the point person for the College of Engineering. Students, leaders from student groups, and department advisors will be invited to participate. Their feedback and insight into students’ needs will be important. Dean Brown asked the chairs/director to send him the names of people they think would be good to serve on this committee.

Dean Brown commented that many of our engineering students work part time and may plan to continue with the same company after graduation. They should be encouraged to interview to see what other opportunities are available to them.

**Academic Senate Candidates**
The College of Engineering continues to have good representation on the University Academic Senate. Current senators are: Mike Kirby (SofC), Kuan Chen (ME), Tim Ameel (ME), Eric Eddings (ChE), and Peter Martin (CVEE). Mike Kirby will be going on sabbatical and Kuan Chen’s term is ending.

Nominations to replace these two positions were solicited and the following nominations have been received: Paul Tikalsky (CVEE), Larry DeVries (ME), Reas Chaudhuri (MSE), and Ebbie Bamberg (ME). Current membership and/or nominations do not
include BIO, ECE or SoC. It is good to have broad representation so Dean Brown asked the chairs/director to contact their faculty about Senate service and to send Sandy Bruhn the names of those who are interested and who would be good representatives of the College. The Senate is the group that sets the policies and procedures we operate under and so we need to have people that represent us well.

**Budget Calendar**
The budget process starts Friday, March 7; the Budget Book is due to VP Pershing April 11. Michael commented that the University has implemented a new budget system this year. Dean Brown told the chairs/director to press forward on faculty performance evaluations and as budget information is received it will be forwarded to them. Once we have a clear picture of where we stand, budget meetings with each chair/director will be scheduled.

It was thought that the Engineering Initiative would receive some funding this year, but not the $2M requested. Funding for USTAR is disappointing; no ongoing funding increase will be given.

**Engineering Deans Council – Public Policy Colloquium**
Dean Brown attended the Engineering Deans Council Public Policy Colloquium on February 26 and 27 in Washington DC. The Colloquium was titled Engineering Solutions for the 21st Century and discussed public policy issues of concern to the engineering education community. He also had the opportunity to meet with some of the Utah delegation to discuss these issues. Dean Brown will send the chairs/director copies of Colloquium presentations.

At the last Executive Committee Meeting, our partnership with the Salt Lake Center for Science Education was discussed. As an update, Ashley Paulsen, one of the College Academic Coordinators, will be developing and teaching a middle-school engineering course. There will be opportunities for others in the College to help. It will be important that whatever we do is scalable, as we hope to roll this program out to schools across the state.

Phil Smith stated that he would support moving engineering into the K-12 schools. He suggested including the preparation of high school teachers for teaching engineering topics as part of the next Engineering Initiative.

Dean Brown commented that the major message students receive from school counselors about engineering is “if you are really good in math and science, you would be good in engineering”. This may discourage capable students who can get the impression that engineers just solve math problems all day. The message ought to be positive: “go into engineering -- you can make a difference in the world,” “improve the quality of life, safety, productivity,” “engineering is a field of creativity, innovation, and discovery.” This positive type of messaging will soon be seen in magazines such as PRISM.
Managing Student Behavior
Dean Brown recently met with Annie Nebeker Christensen, Dean of Students; Lori McDonald, Associate Dean of Students; and Jay Wilgus, Assistant Dean of Students. The Office of the Dean of Students and The University Counseling Center realize that faculty and staff sometimes encounter inappropriate student behavior. Their offices are available to help when faced with this challenge. Included with the agenda for each chair/director was a pamphlet titled “Managing Difficult Student Behavior”. They complimented Kent Udell on the way he handled a very difficult problem he recently experienced in his department. They said that a lot of the problems we have are with international students because of cultural and communication issues. Dean Brown suggested that the departments contact the Counseling Center or the Dean of Students Office if they have problems. They have people that can help work through things. We need to be on the outlook for students and faculty that are troubled.

Rick Rabbitt commented that there could be more financial support for counseling needs and it seems there should be a resource where we can encourage counseling to faculty or staff free of charge. It would also be beneficial to have the opportunity to bring counselors into the department to talk to groups of faculty.

Utah Technology Council
Dean Brown asked the Committee to send him names of companies related to information technology or life sciences that would benefit from membership in the Utah Technology Council. UTC has been a very effective supportive of engineering education.

Discussion Items

Mechanical Engineering Strategic Plan
Kent Udell reviewed the strategic plan for his department.

Student Quality Goals:
Direct admit high school students with admission index scores above 115
Admit graduate students with GRE quantitative ranking above 80%

Student Quantity Goals:
Increase enrollment to: 120 UG, 70 M.S., and 20 Ph.D. students per year

Department Faculty Goals:
Reach a total of 31 tenure track faculty focused in different areas of research

Research Goals:
Secure consistent research funding at a level of $8.6 M per year

Development Goals:
Distinguished professors
Scholarships/fellowships
Innovative Partnership Program
10 UG internships for promising domestic students
Guest lecture travel expenses and stipends
UG research awards

Facility Goals – Kennecott Renovation:
40 faculty offices
Lab space
Conference room
Student study areas
Smart Machines Institute
Composites Institute
Renewable Energy Institute

Summary:
Program comparable to departments ranked in the top 20
Top ME department in the Intermountain West
World class faculty with world class reputations

Engineering Systems Certificate
A draft of a Proposal for a Graduate Certificate in Systems Engineering was included with the agenda. Also included was a summary of the proposal and an e-mail from the Department of Defense announcing their intention to formally solicit for a new University Affiliate Research Center for Systems Engineering Research.

Don Bloswick reviewed the Certificate proposal. All branches of engineering use principles of systems engineering. He proposed that initially this Certificate would be located in the Mechanical Engineering Department. It would be a 15 credit Certificate. Three new courses, which will be the core courses, will be developed: Fundamentals of System Engineering, Requirements of Engineering and Management, Systems Engineering Capstone and Project. Six credits would come from existing University graduate courses. Nine of the 15 credits would be more specific to each department.

The proposal is requested by and is being supported by ATK. They will provide three faculty for four semesters who will teach the core and capstone courses. After the three years supported by ATK, hopes are that the program will be self supporting. Students do not have to be matriculated to participate in a certificate program. This Certificate fits the ME non-thesis MS Degree. Departments that would like to be included in the certificate should give Don their information on the department-specific requirements

RPT
Dean Brown thanked the chairs/director for doing an excellent job in putting together the RPT files this year. There has been a significant improvement in the quality of files submitted in the College over the past four year. The RPT process makes clear the importance of mentoring junior faculty members, and the importance of their following
the advice given by their mentors and the senior faculty in their departments. It is very painful to see capable people not succeed. Dean Brown reminded the chairs/director to be sure their departmental and personal mentoring of junior faculty is effective.

Patrick Tresco emphasized the importance of giving straight advice to the junior faculty members, and of documenting the advice given in informal reviews. He also suggested that chairs and mentors make sure young faculty are participating in national conferences and meetings so that they will become known to senior people in their areas.

Dean Brown shared discussions from the Engineering Deans’ Public Policy Colloquium related to the H index and impact factor. Some people are starting to refer to these in retention, promotion and tenure cases. It is the feeling of the engineering deans that this is inappropriate and should be strongly discouraged. Those metrics are much stronger functions of the area in which one works than they are of the true impact of the research. They are particularly bad metrics for evaluating engineering faculty. The notion that these metrics can be used to compare people across disciplines is an illusion. Experts in each discipline should evaluate a faculty member’s impact compared to others in the specific area of research. Conference acceptance rates and numbers of citations can be useful inputs to the process, but these, too, are far from reliable indicators. Some of the top conferences have fewer submissions because authors self-limit submissions to them, and some authors push up citations through self-referencing.

Graduate Student Recruiting

Milind Deo reported that he has met with the graduate advisors to discuss graduate student recruiting processes. There are big differences in the ways departments recruit. Dean Brown encouraged departments to adopt the practices that have proven successful in the College: advertising graduate student positions as a department; inviting the top students to visit (preferably on the same day); giving students a chance to meet faculty one-on-one; offering 5-year support (based on satisfactory progress) to top students. Quality graduate students are among the most important ingredients to the success of the College.

The departments had been asked to nominate three students for the Wayne Brown Fellowship. They were invited to nominate two more students if they have more outstanding applicants.

This is the second year for the Bray-Conn Opportunity Scholarship. Last year they gave five $5,000 scholarships; their scholarships are available to students in all departments. This afternoon, IM Flash will present us with a check for $40,000, which will be used for eight $5,000 scholarships. The IM Flash scholarships will be targeted to ECE, CE, ChE, ME, MSE, and CvEE students.

The meeting adjourned at 2:10 p.m.