Excused: Monica Heaton, Eric Eddings, Michael Kay
Guests: Jamesina Simpson, Josh Grant

Announcements

- Welcome to Josh Grant, new employee in Development
- Campaign for Community

Calendar

- Scholarships Awards Banquet Oct. 25, 2012, 6:30pm Rice Eccles Stadium, Varsity Room-Level 6
- RPT files due Nov 1, 2012
- Sabbatical Requests due Nov. 2, 2012
- Engineering Day Nov. 3, 2012
- Undergrad Recruiting - Seattle Nov. 8, 2012 6:00 – 8:00 pm, Sheraton Bellevue
- ENAC Meeting -Seattle Nov. 9-10, 2012

Marilyn Davies commented that ENAC is one of the best opportunities that we have to connect to our best donors. Departments may also have other alumni in the Seattle area that you could meet with. Josh can get you lists of alumni in the area.

- Grad Recruiting Visit Feb 22-24, 2013
The College will continue to share the cost of the spring graduate student recruiting fly-in for some of the students that are coming from out of state. We need to get more students applying in order to be able to bring in top graduate students. We have asked faculty members to talk to their peers and have them suggest to students that they take a look at the U. Dean Brown is talking to admissions to see whether we can arrange for a reduced application fee for students (departments or the college may have need to pay the difference). Other schools are doing some clever recruiting by waiving the application fee for referrals from alumni. What should our college do? Should we make the application fee free, or should there be a small fee? After some discussion, the group consensus was that the application fee should be free to the prospective student in order to encourage students to apply.

- Excused student absences – Letter from Amy Wildermuth & Mike Hardman (Addendum I)
It is important to put in class syllabi the rules about missing classes and exams and use good judgment on absences. If students are on university business we need to accommodate them. We want to be reasonable and support students but we also want them to take school seriously and make it a high priority. Final exams should be kept on exam days.

Discussion Items

1. Prospective Student Name Exchanges - The College has supported this in the past. Patrick Tresco has provided two sample letters: A letter to the Prospective Student and a letter to a Colleague (Addendum II). The College will send an email to your students offering to help them find graduate school opportunities and/or jobs if they give us permission to share their contact and GPA information. A list will be made available to the department chair, who can contact chairs at other universities and offer to exchange lists of students who might be interested in graduate school. Contact information received from other schools and on our own students will be entered into the Hobson’s system.
Departments need to supply letters to be sent to these prospective students to introduce them to the U and the department.

2. **Grand Challenges Scholars Program (GCSP)**
   Jamesina Simpson from ECE introduced the Grand Challenges Scholars Program. *(Addendum III)* This is a new educational model intended to prepare the next generation of engineers to solve the 14 grand challenges and be world changers. It is envisioned that the GCSP will be unique to each school, but that each will involve a select cadre of 20-30 students who will build a portfolio having five components:
   - Research experience
   - Interdisciplinary Curriculum called Engineering+
   - Entrepreneurship
   - Global dimension
   - Service learning

   We can use existing classes to cover much of this. It is well aligned with the Honors Program. We can use it to attract top students. Janna will arrange a meeting for Patrick Tresco and Dean Brown to meet with Honors Dean Sylvia Torti to have a dialogue about GCSP and Honors in Engineering. *(Meeting was held Nov 5th)*

3. **Degrees/Certificates** - Chuck Wright is working to clean up some dead degrees before he leaves. We want to have a BS, MS, and PhD degree in every department, and to eliminate degrees that are not used.
   New degrees and certificates:
   - Data Center Engineering Certificate
   - Petroleum Engineering MS degree – JoAnn Lighty briefly introduced this degree proposal. This will be a 16-month distance program aimed at employees of oil and gas companies, who have engineering degrees in some area, but who would benefit from having a petroleum engineering degree. Domestic oil production is increasing and there will be increasing demand for petroleum engineers. This program will give an academic face to the research that is already going on at the U.
   - Big Data MSdegree – Many companies find themselves drowning in data; that is the motivation for this new degree, which covers security, analytics, engineering and architecture at the masters level. It will support a growing PhD program in the same area.

4. **Math** - The Engineering Math sequence was started this year. This is a four-course sequence. We would like to have all engineering students take their math through these courses. Department Chairs were asked to be supportive of this sequence as they talk to faculty and advisors.

5. **Commencement Changes** – There is some discussion about changing commencement. One suggestion was to have commencement on Thursday and also to get a speaker who is a real draw. Dean Brown asked the Chairs for feedback on what changes they would like. General group consensus is that Friday morning commencement is preferred and in recent memory, the speakers have been good.

6. **The Utah Engineering Dean’s Meeting** – Salt Lake City Community College hosted this year’s meeting on October 16th. Abraham Teng at UVU would like to have a special relationship with the U, so that UVU’s program would be tailored to match with our requirements. This will require that our freshman and sophomore courses be fully articulated, and be courses that they can teach. We have scholarship money available for transfer students.

7. **Prosperity 2020** - This was a mainly K-12 proposal put forward last year by the Chamber of Commerce, which was not funded. This year they are trying to put together a better proposal. Stan Lockhart is
leading the STEM part of the proposal, and needs ideas on what we would do to get more students into engineering. Some states are starting high school engineering classes, but there is nothing like that in Utah. Project Lead the Way provides good preparation for students interested in technology degrees but not for engineering degrees. What could you do with a few more resources that could help with retention? Please send Dean Brown any ideas you may have.

This year, the Commissioner of Higher Education, Dave Buhler, has a proposal to help higher education attract and retain STEM students, including health science. He is asking for $20 million. He has a formula put together based on current budget and enrollment. He needs ideas on what we would do with the money if it came to Engineering. This is very reminiscent of the Engineering Initiative; it is all about growth. Send Dean Brown your ideas and he will put them into our proposal to the central administration. Dean Brown will send out an email with more information.

8. **Change in LDS Mission Ages** - The LDS church’s General Conference in October announced a major change in the age that men and women can leave to serve church missions. For men the age dropped from 19 to 18 and for women the age dropped from 21 to 19. Half of the U’s income comes from tuition. If next year our enrollment were to drop by a quarter, it would have a very negative effect on the institution. Of course, it will even out eventually, when the first cohort of younger missionaries returns. We will have students coming in as freshmen who haven't been in school. There will probably be more women who go on missions. If women are studying engineering, they may be more committed to finishing than if they were in other types of degrees. The university must adjust its policies to accommodate this change, or it will hurt our ability to recruit and retain these students. We need to admit students right out of high school, make it easy to defer for two years, and make their entry into the university smooth when they return. It is critical that ACT and AP scores not “atrophy.” In the College, we need to shift more scholarship money to freshman, and we need to keep in touch with the students who are interested in Engineering while they are away.
From: Michael Hardman & Amy Wildermuth [mailto:20121018dp-excused-absences-dmail@umn.umn.edu]
Sent: Thursday, October 18, 2012 9:59 PM
To: Richard B Brown
Subject: [UofU] Excused Student Absences

Dear Colleagues,

At this time of year, we often have questions asked about students who are absent from classes and/or exams as a result of traveling as part of official university activities such as performing as part of an official university musical group, presenting one’s research at a conference, or participating in intercollegiate athletic competition. We are aware that absences from campus during classes can interfere with course expectations. University Policy 6-100(III)(O), however, allows students who are away from campus on official university business the opportunity to make up exams and assignments missed during their absence.

Allowing a student to make up an exam may be accomplished in a number of ways. The exam could be administered before the student leaves campus, the exam could be given at the regularly scheduled time through a proctor at a host institution, or the exam could be administered after the student returns. Whatever method is selected, we appreciate your cooperation in complying with this policy. If you have any questions about how to provide an appropriate make-up opportunity, please contact your department or college for guidance. If you are still unclear on how to proceed, please contact Amy Wildermuth for additional assistance.

We also want to note that we seem to have more conflicts during the closing weeks of the semester. In particular, we have received complaints that many students have become overloaded with multiple exams on the final days of the semester before the final examination period. Because some students may be traveling on university business during the last week of classes, we want to remind you that the make-up policy must be observed through that week just like any other week of the semester. We would also like to encourage you to use the final examination period at the end of each semester for the administration of final exams. Because it is important to allow students appropriate preparation time for each of their exams, University Policy provides that final exams must be given at the times officially set forth by the Scheduling Office.

If you have any questions or concerns, please feel free to contact either of us. We wish you a successful and enjoyable remainder of the semester.

Very best,

Michael Hardman, Interim Senior Vice President for Academic Affairs
Amy Wildermuth, Associate Vice President for Faculty
Dear Prospective Student,

The Department of Bioengineering at the University of Utah is seeking outstanding applicants for Ph.D. degrees in Bioengineering. The deadline for applications is January 15, 2009.

The University of Utah campus is located in Salt Lake City nestled on 1,534 acres at the foot of the Wasatch Mountains. Our strategic location near an international airport makes it easy for students and their families to travel in and out of campus from anywhere in the world. A perennial top twenty program, the department of Bioengineering, is one of the oldest in the U.S. with several National Academy of Engineering members and strengths in Biomaterials (Profs. Hlady, Grainger, Tresco, Stewart, and Kiser), Biomedical Imaging and Visualization (Profs. Joshi, Johnson, Hsu, and Weiss) Cardiovascular Engineering (Profs. MacLeod, Sachse, Poelzing, and Shui,), Neural Engineering (Profs. Normann, White, Rabbitt, Clark, and Greger), Nanomedicine and Drug Delivery (Profs. Kopecek, Kim, and Ghandehari) and Biomedical Device Innovation (Profs. Hitchcock and Christensen). For a complete overview of ongoing research and our exceptional faculty, visit us at http://www.bioen.utah.edu.

Graduate students in Bioengineering start the program with core courses of their choice in Life Sciences, Engineering Fundamentals, and Scientific Presentations, and then build upon this foundation with focused study in such areas as Bioinstrumentation, Biomaterials, Biomechanics, Cardiac Electrophysiology and Biophysics, Computational Bioengineering, Neural Engineering, and Scientific Imaging and Visualization.

Outstanding applicants are offered a 5-year financial package to support their Ph.D. education at the NIH pre-doctoral level of $26,000/year, an 11-credit hour per semester tuition benefit at a value of $13,833/ year, which includes graduate health insurance for a single student valued at $1,200/year. The total value of such offers exceeds $199,000. In addition, the department sponsors a yearly Biomedical Engineering Conference, and provides support for students to attend national conferences to present their research. To learn more about the student conference visit http://www.bioen.utah.edu/conference/canyons2008.

To apply online, visit http://www.bioen.utah.edu/education/graduate/graduate_admissions/graduate_admissions.php.

Thank you,

Patrick A. Tresco
Acting Chair, and Professor of Bioengineering
Associate Dean for Research, College of Engineering
Dear Colleague,

I would appreciate your help in forwarding this information (also provided in the “Dear Student” attachment) to prospective graduate students in your program. The Department of Bioengineering at the University of Utah is seeking outstanding applicants for Ph.D. degrees in Bioengineering. The deadline for applications is January 15, 2009. **In addition, please note that we have included another attachment (called “Student Grad list”) with the contact information of outstanding undergraduate students in our program who have expressed an interest in pursuing graduate studies in your discipline. We would appreciate you sending us a similar list if you have one by responding to Laura.Bulter@utah.edu.**

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Thank you,

Patrick A. Tresco  
*Acting Chair, and Professor of Bioengineering*  
*Associate Dean for Research, College of Engineering*
Grand Challenge Scholars Program (GCSP)

1. What is GCSP?
   Over the past couple centuries, the list of important engineering achievements is dominated by devices (ex. planes, cars, lasers, spacecraft, telephone). In the next century, the National Academy of Engineering anticipates the greatest engineering achievements not in the form of devices, but rather innovative technologies addressing complex social issues using a systems approach (i.e. the 14 grand challenges, listed below). Engineering achievements of the next century will also require engineers to shape public policy, transfer technical innovation to the market place, and to inform and be informed by social science and the humanities. The 14 grand challenges are inherently global, and will likely “change the world.”

14 Grand Challenges:
   a. Make solar energy economical
   b. Provide energy from fusion
   c. Develop carbon sequestration methods
   d. Manage the nitrogen cycle
   e. Provide access to clean water
   f. Advance health informatics
   g. Engineer better medicines
   h. Restore and improve urban infrastructure
   i. Prevent nuclear terror
   j. Secure cyberspace
   k. Reverse-engineer the brain
   l. Enhance virtual reality
   m. Advance personalized learning
   n. Engineer the tools of scientific discovery

The GCSP is a new educational model intended to prepare the next generation of engineers to solve the 14 grand challenges and be world changers.
Source: www.grandchallengescholars.org

It is envisioned that the GCSP will be unique to each school, but that each will involve a select cadre of 20-30 students who will build a portfolio having five components:

1. **Research experience** (Project or independent research related to a Grand Challenge)
2. **Interdisciplinary curriculum called Engineering+** (Preparing engineering students to work at the overlap with public policy, business, law, ethics, human behavior, risk as well as medicine, and the sciences.)
3. **Entrepreneurship** (Preparing students to translate invention to innovation; to develop market ventures that scale to global solutions in the public interest)
4. **Global dimension** (Developing the students’ global perspective necessary to address challenges that are inherently global as well as to lead innovation in a global economy.)
5. **Service learning** (Developing and deepening students’ social consciousness and their motivation to bring their technical expertise to bear on societal problems.)
2. Why should we start a GCSP at the University of Utah?

- We already have the infrastructure to start a program with minimal additional resources. The following could be used to satisfy each GCSP component using opportunities / resources already in place or easily obtainable.
  
  o Research Experience – Have students apply for the undergraduate research opportunities program (66 students from engineering participated last year), and / or conduct a senior design project relating to one of the Grand Challenges.
  o Interdisciplinary curriculum called Engineering+ -- satisfy using an intellectual exploration course, or through a LEAP section, or through Think Tanks (year-long for-credit courses that draw students from all disciplines to collaborate to design original solutions to pertinent social issues) or other Honors courses offered through the Honors College. Students could also take more advanced Chemistry, Biology, or Physics classes
  o Entrepreneurship – create a venture (for-profit or non-profit) which may be a service organization or a club with a commitment of at least 4-6 months, work at a start-up or early stage venture that addresses a Grand Challenge topic, participate in startup competitions and/or entrepreneurship events.
  o Global dimension – satisfy using an intellectual exploration course, study abroad, or Honors College course or Honors College Think Tank, or international internship, work at an internationally-minded program located domestically. Join the newly-created International Engineering Club.
  o Service learning – Require 2 or 3 semesters active participation in Engineers Without Borders, or through a tutoring organization, or a leadership role in a service oriented activity.

- We can attract the attention of many companies with work relating to a Grand Challenge who are looking for top interns / graduates and develop a close relationship with them so they hire our GCSP graduates, sponsor research projects, provide internships, etc.
- We can use the Grand Challenges to excite students and attract them to engineering. We can use the Grand Challenges to help students understand what engineering is about and how it can impact society and change the world.
- We can use the GCSP to attract more women to engineering. Women generally are believed to be attracted to fields wherein they feel they are helping people and are making a difference. We can use the Grand Challenge topics to show how engineers help people and can change the world.
3. Why should we create a GCSP through the Honors College?

- Top students want to be in honors.
- We want top students to participate in the GCSP.
- The new Honors College facilities and housing will help attract top high school students interested in engineering. Having a residential component especially the first year is known to help retention.
- Engineering is losing many (top) students to other disciplines by not better engaging the Honors College. Currently, about 16% of incoming freshman to the Honors College are in engineering (about 320 students), but over the past decade, only about 5% (about 107 students) of the original 16% actually graduate with an engineering degree.
- Engaging the Honors College as a School will help even out the disproportionate number of students from Biomedical Engineering graduating in the Honors College. Between 2003 and 20010, 18 honors degrees were awarded in engineering:
  - 12 biomedical engineering
  - 1 chemical engineering
  - 1 civil engineering
  - 2 computer science
  - 2 electrical engineering
- The Honors College does not retain any SCH. Courses are capped at 35 students. The Honors College can buy out a faculty member to teach a course. The Honors College may give us an excuse to introduce new courses with low numbers of students.
- GCSP can build on the foundation, financial support, and upper administration support already established by the Honors College.
- The Honors College can help students connect with internships, study abroad, think tanks, and other interdisciplinary and service work.
- The Honors College is currently working with the College of Education to create an Early Assurance Program only for that college. Engineering could do something similar if we want to keep our best students through their Ph.D.
- The Honors College is working to create 2 Honors Professorships for each College of the University.
- The new Honors College administration is willing to work with us to create a program that addresses the needs of both Engineering and the Honors College.