Report to the Strategic Alignment/Budget Reduction Review Committee

November 20, 2009

Budget Reductions

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<th>FY 2009</th>
<th>FY 2010</th>
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<tr>
<td></td>
<td>$511,633</td>
<td>$1,316,747</td>
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<td>Total</td>
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<td>$1,828,380</td>
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Managing Budget Reductions

Unfilled faculty and staff positions

- Associate Dean, COE: 225,000
- Marketing Director, COE: 140,000
- Office Manager, EECS: 90,000
- Office Staff, EECS: 60,000
- 0.5 FTE Staff, CBEE: 40,000
- Faculty, EECS: 103,000
- Faculty, EECS: 103,000
- Faculty, CCE: 103,000
- Faculty, CCE: 103,000
- Academic Advisor, MIME: 75,000
- Faculty, MIME: 103,000

Subtotal: 1,145,000

Services, Supplies & Equipment

- Deferred IT Equipment Purchases: 350,000

Faculty Buy Out

- Minimum in FY 2010: 400,000

Subtotal: 750,000

Total: 1,895,000

Strategic Alignment

Sub-Units

- The College complies with the number of sub-units guideline with four schools and one department.
Class Size

- The College averaged about twenty courses below the minimum class size guidelines during FY08 and FY09 (lower, upper and graduate levels). Units have been advised to cancel traditionally small classes before student registration periods, monitor registration and inform students of potential cancellations and, when appropriate, cancel courses prior to the beginning of term.

- We may continue small classes in our Surveying and Mapping (Geomatics) program, specifically CE 406/506, CE 461/561, CE463/563, CE 465/565, and CE 469/569. These courses are required for students to take the Fundamentals of Land Surveying Examination in pursuit of the Professional Land Surveyors (PLS) license offered by the State of Oregon. We are one of only two institutions in the State to offer advanced coursework in this area. The average age of a PLS in the State is about 57 and increasing, creating a looming crisis in the construction industry. A new faculty member just joined this area in 2009, and we expect class size to increase over the next two years.

- Units offering small enrollment courses must provide justification to the Dean. We expect that justification to be directly linked to timely graduation of students.

Baccalaureate Programs – Number of Graduates

- The Engineering Physics degree has been terminated. Current EP students (at OSU and in community colleges) have been informed that they will be accommodated through graduation in existing (and continuing) upper division ECE, ME and PH courses.

- The Environmental Engineering program is below the minimum of 20 graduates per year. The pre-environmental engineering enrollment has grown from 27 in fall 2007 to 64 in fall 2009. Based on this growth, we expect the number of graduates to exceed the required minimum within two years.

- The Bioengineering program is below the required minimum (17, 11 & 20 for 2007, 2008 & 2009, respectively); however pre-bioengineering enrollment has grown approximately 20 percent over that same time frame. This suggests that this program will exceed the minimum within two years.

- The Manufacturing Engineering program graduated an average of 14 students over the last three years. Pre-Manufacturing engineering enrollment has been variable over the last few years. The recent merger of the Departments of Mechanical Engineering and Industrial and Manufacturing Engineering has increased the opportunity of students to discover the advantages of Manufacturing Engineering. Enrollments at both the pre- and pro-school levels have grown by 50 percent in the last two years. In addition both Industrial and Manufacturing Engineering have served as second choice pro-school majors for students applying to Mechanical Engineering. With continued high demand in ME we expect more students will complete pro-school in Manufacturing Engineering.

- Both Nuclear Engineering and Radiation Health Physics programs are below the minimum having three-year average graduate rates of 13 and 8, respectively. Pre and Pro-school enrollments have grown by about 50 percent in both programs in last two years. While we expect continued modest enrolment growth, we recognize that additional students will be needed in the undergraduate RHP program to meet the target minimum. RHP leadership is
investigating opportunities to develop stronger pipelines programs to community colleges particularly those with medical-related associate degrees and coursework.

**Masters Programs**

- The Masters of Ocean Engineering degree has been terminated. Current students will be accommodated through existing courses (principally CE 6xx). These courses may be below the minimum class limits, but will be offered to accommodate the students’ timely graduate unless suitable alternatives can be found.

- The Masters of Business and Engineering (MBE) is a unique degree begun in Fall 2004 as a collaborative degree between the College of Engineering (School of Civil and Construction Engineering) and the College of Business at Oregon State University. It is largely a professional degree and has included both traditional on-campus students as well as actively-working students. Although only 3 students have graduated on average over the last three years, the program leader Dr. David Sillars has nearly doubled the number of students over the last year (5 versus 9). Actions currently underway to both improve quality and enrollments include:
  - Continued curriculum and course improvements through close collaboration between the Colleges of Business and Engineering, and through industry involvement—thus improving industry endorsement of the Program;
  - Continued efforts for development of course delivery that reduces or eliminates both time constraints and geographic constraints—encouraging increased enrollment from working students. These efforts are targeted toward on-line delivery of lectures and student discussion, perhaps coupled with short (one-week) Corvallis campus residencies at key program points. Three of four required CCE courses are now available in this format; others are under development. Discussion of off-campus delivery has included the use of Bend campus facilities as well as other Oregon population centers;
  - Increased exposure of the program through an enhanced School website.

We will continue to monitor the growth of the MBE program.

- The number of graduate students in Materials Science has grown by nearly 50 percent in the last three years. We expect the number of graduates to easily meet the minimum requirement within the next two years.

- Radiation Health Physics graduation rate is presently below the required minimum however enrollment in MS and MHP has increased more than 3-fold in the last three years (24 to 86) due in large part to the successful distance delivery program developed by faculty. We expect the three-year average number of Masters-level graduates to exceed the minimum in the next two years provided the overload compensation model can be crafted in a way that faculty continue to participate in distance delivery options.

- This fall a joint program with OHSU in Medical Physics was initiated. This high demand field will further increase the number of graduates at both the MS and PhD level.

- The number of Nuclear Engineering Masters degrees steadily increased over the last three years (2, 5, & 7) and MS enrollment is generally higher over levels seen in the previous three or four years. In addition, NE has graduated their first MENG student in 2009. We expect that this, together with the solid enrollments, will allow the program to graduate enough students to meet the minimum within two years.
**Doctoral Programs**

- Industrial Engineering faculty have grown the enrollment of doctoral students from 10 three years ago to 22 this fall principally though their connection to the Microproducts Breakthrough Institute (MBI) and the growth is expected to continue as the renovations to B-11 on the HP campus are completed. This growth will allow the doctoral program to exceed the guidelines.

- There have been significant increases in the levels of research across both RHP and NE. The College has invested about $800K in COP funds to construct additional research laboratory space in the Radiation Center. Together with the increased recruiting planned by NERHP, we expect the numbers of doctoral graduates in each program will exceed the minimums.

**Planning for next Year**

- It is anticipated that Engineering will propose an increase in the differential tuition rates over and above whatever the University proposes as an increase to the base tuition.

- The COE Engineering Shop located in Merryfield Hall will become self-funded through increased fees and increased billable hours. The shop remains a high value resource to researchers across the College and to others in the University.

- Depending on the magnitude of the FY 2011 reductions;
  - Faculty vacancies occurring in FY 2010 will go unfilled through FY 2011.
  - Units will reduce total FTE in GTA appointments during FY 2011.
  - Additional faculty buy outs will be encouraged.

- The Dean and School Heads will continue to meet with faculty and staff from units/programs in which the guidelines are not being met to develop and implement steps to ensure that the guidelines will be met.