EFAC Meeting—April 15, 2005
Minutes

EFAC Members present:
Jim Boyd (AERO)
Charles Lessard (BMEN)
Zhengdong Chen (CHEN)
Richard Furuta (CPSC)
Scott Socolofsky (CVEN)
Dan Jennings (ENTC)
Cam Nguyen (ELEN)
Warren Heffington (MEEN)
Christine Economides (PETE)

Minutes for the March 11, 2005 meeting were approved by the EFAC via e-mail vote on March 22, 2005.

The EFAC was joined by Dean Bennett.

There was no formal agenda so the meeting consisted of discussion of a range of topics with Dean Bennett.

Faculty hiring
The college had 16 reinvestment positions to fill this year and about 8 to 10 more due to vacancies. Only about 10 faculty members left this year of the approximately 320 tenure/tenure track faculty in the college. This is a ten-year low. There is some expectation that some faculty have delayed their retirements due to the recent problems with the stock market so this number is likely to increase in subsequent years.

U.S. News and World Report Rankings
Overall the college stayed the same: 14th overall and 8th in public institutions. The Dean discussed a number of departments’ recent rankings in U.S. News and World Report. Aerospace’s positive move reflects their good success in recruiting faculty. Petroleum has slipped a bit; in particular Tulsa has moved ahead of us. Biomedical Engineering may have been a bit high last time at number 12; this time it is number 20. However there are anomalies here—MIT doesn’t have a biomedical department yet it is highly ranked.

Overall it is hard for colleges to move much in the rankings. Georgia Tech. moved a lot and Michigan slid a bit. UIUC is solid but perhaps sliding. UCLA is up a bit. Overall there seem to be just slight variations due to the subjectivity of the ratings.

Coordination among the Deans
The University deans meet every other week; first in a deans-only 1 hour meeting followed by a 2 hour meeting with the Provost and perhaps others (President, VPR, etc.).
Engineering Deans from across the country meet twice yearly. This allows an opportunity to compare our trends with the national trends.

**Enrollment trends**

One national trend is shifting enrollments among the disciplines. Computer Science is down (dropped 50% in the last 5 years here; 35% nationally). Computer Engineering also is down 20% to 25%. Electrical Engineering is stable. Biomedical Engineering is the most rapidly growing area. Mechanical Engineering has seen tremendous growth around the country. Civil Engineering has seen upticks in growth. Aerospace and Chemical Engineering have seen mild growth. There is some growth in Industrial Engineering. Locally, Engineering Technology could see some growth and Petroleum Engineering is undergoing planned growth.

Overall our college’s enrollment is down. Historically, the undergraduate enrollment target has been around 7,500. At present we are around 1,000 under that. Our normal capture rate is 53% (students admitted to the Freshman class who actually enter engineering). However in 1999, the capture rate was 61%, which lead to tightening department enrollment caps. The caps weren’t adjusted when the capture rate returned to normal levels. This is being addressed now.

As a result of the enrollment trends, allocation of resources needs to be evaluated. The dean doesn’t want to modify the reinvestment allocations, but may look at replacement positions. Presently, when a faculty member retires or leaves, $70,000 of the budget is left with the department. This probably will change in the future.

**Weighted semester credit hours**

The provost meets with each dean individually and requires measures that show benefit to students from the tuition increases. There was some discussion about University funding and weighted semester credit hours, which are affected by the level of the class (e.g., Ph.D. receives more credit than undergraduate) and where it is in the University (e.g., engineering receives more credit than English). 20% of the faculty produce 35% to 40% of the weighted semester credit hours. There is no direct tie between the College’s funding and the weighted semester credit hours, but if the weighted semester credit hours go down then the amount of money coming into the University also decreases. There’s an expectation that if we add faculty, the number of weighted semester credit hours should go up.

An interesting statistic is that fewer than 50% of the University’s tenure track faculty are teaching undergraduates while 60% of Engineering faculty are. The official data set of the University is available for viewing on the Web from the Dean of Faculty (see the OISP office).

**Projection of future trends**

Department heads were asked to project measures into the future. Beyond the need to bring the undergraduate program back to historical levels, expansion needs to be in
graduate programs. Most schools have a PhD student to faculty ratio of 4 or 5. Ours is in the 3 to 4 range. Open questions are how to support the students. Also many of the students who used to come to U.S. schools are now going to Australia, Europe, etc., because of our increased border controls. We have 2000+ graduate students now. Meeting Vision 2020 goals probably requires an increase of 30% to 35%.

Undergraduate teaching issues
Of entering engineering undergraduates only 47% actually graduate from engineering (within 6 years). This compares to a graduation rate of around 60% in the liberal arts, around 70% in agriculture and business, and in the 20’s in science. Most of the entering students graduate within 4 ½ years, which means that the ones who don’t graduate from engineering are graduating from somewhere else in the University. The NSF Steps program and the Aggie Step program are trying to do something about this (Dean Howze talked to the EFAC about this in more detail in the March 2005 meeting). Some of the concerns that Dean Bennett has is that the emphasis on AP classes in high school means that some students are not getting as good a mathematical grounding as they did previously (i.e., they’re not mastering the necessary basic classes in their rush to get to the advanced ones). Georgia Tech has tried instituting a math corner—A&M Consolidated High School has a similar peer teaching center. Something like this may work well here.

These minutes were approved by EFAC Email vote on June 14, 2005.