



Date: November 7, 2012

From: James Houpis, Provost and Vice President, Academic Affairs
Susan Opp, AVP, Academic Programs and Graduate Studies

To: Michael Leung, Dean, COS
Saeid Motavalli, Chair, Department of Engineering
Chris Chamberlin, Chair, CAPR

Subject: MOU Meeting – Department of Engineering

On November 6, 2012, Michael Leung (Dean, College of Science), Saeid Motavalli (Chair, Department of Engineering), Chris Chamberlin (Chair, CAPR), Susan Opp (AVP, Academic Programs), and James Houpis (Provost and VP, Academic Affairs) met to discuss the 5-Year Program Review for the Department of Engineering and to develop an MOU as required by CAPR.

The Department of Engineering has been undergoing rapid growth and changes in degree programs. Currently, the department consists of three BS programs (Industrial Engineering, Computer Engineering, and Construction Management) and two MS programs (Engineering Management and Construction Management). However, at the time of the department's self-study for this review (2008), there was a single BS in Engineering with two options (Industrial Engineering option and Computer Engineering option), and two MS degrees in Construction Management and in Engineering Management. Since that time, the BS in Engineering has been eliminated and replaced by two separate degrees, namely a BS in Industrial Engineering and a BS in Computer Engineering. A BS in Construction Management has also been added since the self-study was conducted. The addition of new programs and the schedule of ABET has resulted in at least three different 5-Year Review dates for the various degrees in the Department of Engineering which could present a problem in the future.

The BS in Industrial Engineering is currently the only program with ABET accreditation, although the Chair expressed a desire to apply for ABET accreditation for Computer Engineering and to seek accreditation for the Construction Management degrees from their professional organization. Other long term curricular plans include development of a BS in Civil Engineering because of the natural linkages to Construction Management, and possibly development of a School of Engineering within the College of Science to provide higher visibility for engineering.

The Chair reported there are approximately 315 majors now in the five degree programs with only six TT faculty in the department. The Chair expressed his appreciation for the TT position in Construction Management filled last year and the search for a TT faculty in Engineering currently underway, but

indicated that more faculty will be needed as the programs, particularly Construction Management, continue to grow as expected.

The Department has a comprehensive student learning assessment program for Industrial Engineering which is necessary to meet the rigorous accrediting requirements of ABET. The assessment tools include exams in key courses, portfolios of work, senior projects, as well as faculty self assessments of courses and senior exit surveys. The Department has utilized the results of these tools to make ongoing improvements in Industrial Engineering student learning. These improvements include transferring and changing emphases in courses to ensure important topics are strengthened, changing course prerequisites to ensure students are adequately prepared, removing a course when it was not valuable, and adding techniques to courses with an added emphasis on lab activities. The Chair indicated that the Department has a faculty committee working to develop all assessment procedures and plans for data collection, including for the newest degree programs. We look forward to seeing the results of those assessments in the next 5-Year Reviews.

The results of the MOU meeting are as follows:

1. The Department Chair should work with the Chair of CAPR to determine a more reasonable timetable for the next 5 year reviews to facilitate completion and minimize faculty burn-out.
2. The Department expressed their view that General Education learning outcomes for critical thinking are met by coursework in the major. The Department is strongly encouraged to work with Sally Murphy to develop appropriate assessment methods to demonstrate student competencies in critical thinking in the major. With their demonstrated expertise in student learning assessments, the Department of Engineering is in a strong position to lead the University in General Education competency reforms, particularly in the area of critical thinking. We look forward to seeing the results of these assessment efforts in the 2013 Annual Report to CAPR from Engineering and at the Spring Symposium on Critical and Creative Thinking at CSUEB.
3. The Department will develop ongoing plans to assess student learning outcomes in the degree programs not currently covered by ABET accreditation and will report on those efforts in their Annual Report to CAPR.
4. The Department will consider semesters rather than quarters when/if plans are developed to offer a BS in Civil Engineering in the future and will keep the AVP of Academic Program informed of these plans as they develop.

The Department of Engineering is commended for its successful student learning assessment efforts, for the work of its faculty in support of student learning and success, and for its reaccreditation by ABET in 2010. CAPR is also thanked for the informative report.

cc: Chris Chamberlin
Mitch Watnik
Sophie Rollins
Sally Murphy