

**Program Performance Review: Culmination Meeting Memo
Mechanical Engineering – M.S.**

The 2015-2016 Program Performance Review (PPR) process for Mechanical Engineering – M.S. program concluded with a culmination meeting on April 28, 2017.

The following people attended the meeting: Anil Puri (Provost), Pamella Oliver (AVPAP), Su Swarat (Director of Assessment and Educational Effectiveness), Susamma Barua (Dean, ECS), Sang June Oh (Associate Dean, ECS), Chean Chin Ngo (Chair).

The Provost congratulated the program for successfully completing the PPR. The program was commended for the significant accomplishments it has made:

1. The AVPAP and the Dean both commended the previous Chair (Sang June Oh) for his strong commitment to student success, solid leadership, and strong moral support to the faculty and Department.
2. Department faculty and College administrators are committed to the success of the program and are anticipatory of needed improvements.
3. Program curricula consist of a diverse range of courses in specialized areas of the field, providing a blend of application and theory.
4. Faculty are active and current in their respective areas and share a strong sense of community, collaboration, and program ownership.
5. Faculty are committed to maintaining a level of rigor that results in highly qualified and educated members of the profession and are enthusiastic and willing to increase mentoring of students, including research projects and theses.
6. Program advising is well structured and utilized by students.
7. Students are eager to be involved with faculty research opportunities.
8. The CATIA instruction provided by the Department provides students with a skill that is in high demand and sought after by industry employers.

The major recommendations and concerns raised through the PPR process were discussed. Suggestions on how to address them were provided:

1. Establish a clear and concise Strategic Plan to support the mission of the Program, including foci in enrollment, research experience, and community collaborations.
 - The Dean commented that the College is in the process of developing a college Strategic Plan. The Department will start its own Strategic Plan once the college plan is finalized to ensure that the department plan aligns with the college.
 - The Provost recommended the College to conduct a competitive market analysis for its programs, in comparison to other engineering schools in the region. The analysis could adopt a SWAT analysis format, and identify a few “competitive advantages” for the College. The College could consider hiring an external consultant if necessary.
2. Develop a strategy for increasing faculty size coupled with enrollment growth control.

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- The Dean indicated that 2 faculty members were hired for AY16-17, and 2 more are hired to start in AY17-18. Additional positions have been requested for AY18-19.
3. Adopt Specialization Leads in (1) Robotics, Controls, and Automated Manufacturing; (2) Design and Materials for Manufacturing; (3) Thermo and Fluids Engineering; and (4) Power and Energy to assist with enrollment as well as balance faculty load.
- The Chair indicated that the Department already has faculty expertise in these areas. The Department will examine whether to add more specializations, and if so, will tie the new additions to faculty recruitment. One possible addition is the specialization in Biomedical engineering, which is promising since one recently-hired faculty member has expertise in this area.
 - The Dean shared that the College is looking at ways to expand its offerings. For example, the College is exploring the possibility of a summer program to train high school teachers with vocational emphasis, utilizing manufacturing projects. This program may launch in summer 2018, and can be integrated into the regular curriculum in the future. This program could also evolve into another specialization.
4. Investigate measures for enrollment control such as non-traditional formats of impaction, admission criteria, emphasizing research activities, and redefining areas of specialization.
- The Dean indicated that enrollment control has now been in place. For the MS programs, admission GPA has been raised to 3.0; TOEFL score from international students is now required; The Chairs have also been asked to conduct a closer review of applicants' transcripts at the department level.
 - The Dean also stated that the College regularly provides webinar and live chat sessions with the admitted students to help them become prepared to the program. The AVPAP recommended this practice to be adopted by other colleges.
5. Increase involvement with opportunities within the College as well as across the University and CSU System to showcase the work by students and faculty.
- The Dean indicated that there are already several internal student project showcases and competitions that involve external companies. The current discussion is centered around expanding these competitions to become regional, multi-college collaborative. Such expansion, however, needs manpower to help coordinate.
 - The Chair stated that the faculty all encourage students to participate in showcases or competitions. For example, the Department just hosted the ASME Orange County conference presentation night, and the top 3 students for the presentations are all from CSUF.
 - The Provost pointed out that the program is “promising” in attracting entrepreneurship and donations. He recommended the Department to educate its faculty to think about bringing outside collaboration in support of student projects (not just donations).

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- The Associate Dean indicated that less silos now exist between the engineering disciplines, which led to student capstone senior projects becoming more interdisciplinary. The Provost commended this trend, but also suggested the faculty to branch outside of the College to collaborate with other colleges (e.g. NSM, HHD).
6. Consider utilizing abundant supply of professional engineers as “Professors-of-the-Practice” to offset teaching load and increase the visibility of the faculty and students to the engineer’s company.
- The Associate Dean indicated that the program graduates have fairly good job prospects. Many of them (50-75%) stay in the Southern California region, and about 10% go to graduate school.
 - The AVPAP suggested the College to explore an alumni tracking system to better reach out to past graduates. The Dean agreed with this suggestion, and work to build stronger alumni relations beyond the ABET accreditation requirements. For example, the College is considering adding a recent graduate to the Dean’s Advisory Board.
 - The Provost suggested that that industry partners are often very interested in connecting with the Colleges. He recommended the College to create its own connections with the alumni, not relying only on the University’s Alumni Relations Office. The College’s Assistant Dean and Director of Development can assist in this task.

The Provost concluded the meeting by commending the commitment and energy of the ME-MS faculty, and the contribution of the program to the students and the University.