

16 February 2006

William W-G. Yeh, Ph.D.
Professor and Chair
Department of Civil and Environmental Engineering
Boelter Hall
University of California at Los Angeles
Los Angeles CA 90095

Re: Conclusions and Recommendations of Industry Advisory Board for Civil and Environmental Engineering

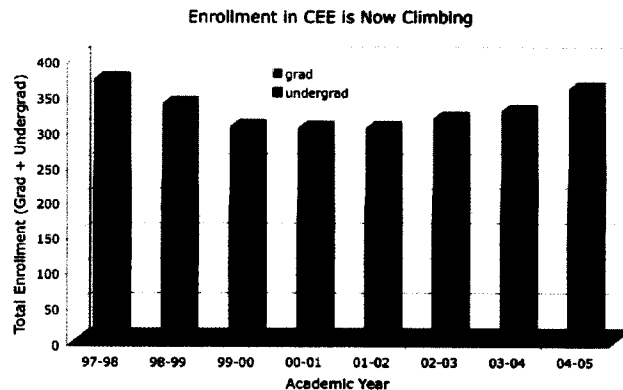
Dear Professor Yeh:

This letter is written to summarize the findings and recommendations of the Industry Advisory Board (Board) following its meeting on Friday, January 13, 2006. The Board consists of eleven individuals, including industry representatives as well as two distinguished scholars outside the UCLA community. Eight of the eleven were present at the meeting. The Board spent one day with faculty, a few graduate and undergraduate students, some alumni, and reviewed many aspects of the current UCLA program in Civil and Environmental Engineering.

SUMMARY AND RECOMMENDATIONS

There was agreement among Board members that the UCLA Civil Engineering and Environmental Engineering program has made impressive progress since the IAB's last review in 2002. This progress has been validated by the

growth in enrollment in both the undergraduate and graduate programs (see figure). The Board was particularly impressed with the new faculty who have joined the program, with the number of faculty who participated in this IAB meeting, and with the stronger sense of cohesion among Department members.



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The Department appears to be functioning well with all members of the faculty active and it seems to be focused on its strengths. The Board would like to take this opportunity to complement yourself, Dean Dhir and the members of your Department, for the significant progress that has been made.

Last time the Board met, we recommended that the Department:

1. Take advantage of its small size to achieve cohesion among members of the faculty and between the faculty and the students.
2. Take advantage of UCLA's location to address problems unique to its Southern California Urban setting.
3. Seek greater depth in its existing specialties rather than entering new ones.
4. Seek to increase student retention by strengthening the first two years of program, (building relationships between faculty and lower division students, doing more to expose students to practicing civil engineers, strengthening courses).
5. Strengthen lower division coursework (strengthen CEE 1, Require stand-alone courses in statics and fluid mechanics, and provide computer training in Matlab)

We remain convinced that these continue to be useful recommendations and are gratified to see significant progress in nearly every area we addressed. In particular, we applaud the incorporation of the new statics/dynamics course, the quality of your new faculty, and the progress toward developing cohesion in the program.

In addition to these comments, the IAB wishes to direct your attention to the following additional recommendations:

1. Use the Department's best faculty to teach undergraduates.
2. Have CEE faculty take an active role in advising each undergraduate from the time they are admitted until they graduate.
3. Find unifying themes to bring the four groups in the Department together.
4. Assign a senior faculty member to mentor each new faculty member.
5. Strengthen training in oral and written communication in coursework.
6. Find additional financial resources to support graduate students.
7. Actively market the Department and its research product.

DISCUSSION

Each of these recommendations will be briefly discussed:

- 1 Use the Department's best faculty to teach undergraduates**
No program wants its most productive researchers spending all their time teaching undergraduate classes. On the other hand, UCLA draws an undergraduate pool of outstanding talent and the undergraduate program should be viewed as a recruitment opportunity. Teaching one of the core undergraduate courses should be viewed not as a necessary duty to be off-loaded, but as an opportunity to be sought after, an opportunity for leadership, and an opportunity to represent the Department to the rest of the University Community.

- 2 Have faculty take an active role in advising each undergraduate from the time they are admitted until they graduate**
A high school graduate who chooses to go to an engineering school ordinarily does so because he or she showed some talent in math and science, and has a vision that these skills could be applied to the benefit of society through a career in engineering. Recognizing that a lower division student gets limited exposure to CEE courses and little reinforcement of that vision, it's important that they have access to persons they can identify with as fellow members of the CEE community. Faculty advisors, experiences in the student organizations, and exposure to practicing engineers can all help fulfill this need.

- 3 Find unifying themes to bring the four groups in the Department together**
When a Department is small, as this one is, it is important to have a cohesive group that works together effectively. Just as multi-disciplinary activity outside the Department is important, so is multi-disciplinary activity within the Department.

- 4 Assign a senior faculty member to mentor each new faculty member**
This would provide for information on how to obtain research funding and imparting the culture of UCLA to each new hire. It is now a requirement at Berkeley and has resulted in better progress and had helped to resolve difficulties that arise before tenure is granted.

- 5 Strengthen training in oral and written communication in the regular curriculum**
Find ways to incorporate training in better communications into coursework without compromising the curriculum or imposing unnecessary

new burdens on the staff. Several members of the IAB could tell stories about Professors who taught them how to structure a problem set or a lab report, and how these lessons still serve them well today.

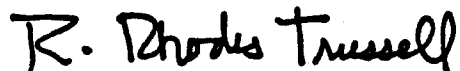
Communications is less about writing proper English, and more about knowing how to present information. A small Department like this one would do well to develop standards, about the presentation of information, and to teach those standards uniformly throughout its curricula.

- 6 Find additional financial resources to support graduate students**
Find additional financial resources that can be tapped so that the best students can be recruited for the program. To get the best students, CEE needs to be in a position to offer a multi-year package. New resources indigenous to the Los Angeles area should be found to support this need. This is a place where Dean Dhir can be very helpful. But, members of the Department, themselves, must take the lead in identifying and lining up possible donors.

- 7 Actively market the Department and its research product**
Finally the Department should actively market its own name and it's research product. Such a campaign should be both on-campus and off-campus, and it should involve conscious use of naming, as well as quality presentations and publications in forums that have high visibility. The IAB recommends that all members of the department present themselves under the name of the Department, as a whole, rather than the name of their individual groups. This allows a small Department to maximize its visibility.

We hope our comments prove useful to you and look forward to meeting with you again after further progress has been made.

Very truly yours



R. Rhodes Trussell, Ph.D.
Chair of Industry Advisory Board