

MINUTES of MECHANICAL ENGINEERING ADVISORY BOARD

Fall 2001 Meeting

Friday October 12, 2001

Present:

Doug Browne (Medisense), Tim Byrd(Tality/CADENCE), Majid_Charmchi (UML), Richard Dawson (GE), Dick Driscoll(3M Touch Systems), Mike Kizner(Raytheon), Dan Manidakos(FLIR), John McKelliget (UML), Alan Mironer (UML), Charles Niguez (Parker-Nichols), Struan Robertson (UML), Charles Roche (Wiremold), Peter Rock (GE), Gary Wenger (Cisco Systems).

To promote confidentiality, the names of the student representatives at the closed session are not recorded.

1. Department Update.

Professor McKelliget reviewed developments within the department since the last meeting in Spring 2001.

- **The wind tunnel:** This is now connected and is operational. The cost was picked-up by the administration as part of electrical renovations to the College of Engineering. We are still looking for approximately \$80 K of instrumentation for the wind tunnel. The wind tunnel has a top speed of 195 mph, and a 2ft.x3ft.x4ft. test section.
- **Secretarial Support:** Jackie Paradise is now full-time within the department, with the proviso that about half her time be spent on projects for the Dean.
- **ME Computer Lab. Upgrade.** Over the Summer the computers were replaced by 19 PCs with 1.4 GHz processors, 30 GB hard drives, and 250 MB of memory. The monitors were also replaced. The approximate cost was \$30K. Of this, \$10K came from the department's equipment budget, \$10K came from the Dean, and \$10K came from Continuing Ed.
- The sophomore courses 22.201 and 22.202 have now switched from Pro-E to Solidworks. The rationale for this is that the learning time for Solidworks is much shorter than for Pro-E. Some discussion followed in which most board members concurred that this was indeed the case.
- **ABET Final Report:** The final report had been received from ABET and the department had received the first 6 year accreditation in it's history. The Chair remarked that there were still gaps in our assessment process and that these would have to be addressed.

- **Enrolments:** These are up somewhat, with 198 undergraduates and 57 graduate students.
- **TA allocations:** These were down this year by two TAs. This was off-set somewhat by Prof. Duffy obtaining two more for the energy program. Currently we are just about covering the undergraduate labs, with no help available for grading.
- There is a proposal to move Work Environment out of the College of Engineering and it is unclear how this will affect TA allocations to the College. Any further reductions in departmental allocations could adversely affect the lab-based and design-test-build philosophy. **A board member remarked that the board views this philosophy as a key component of our curriculum.**
- **There was a suggestion from the board that we look into hiring upper-level undergrad students to cover lab. sections.** The chair remarked that there was little flexibility in the use of TA funds. One possibility was to take advantage of the Work Study program through the Financial Aid Office. A faculty member remarked that one problem with this is that this program is targeted to the need level of the student, rather than the ability of the student.
- **Off campus graduate courses:** It would be desirable to expand the graduate program by having adjuncts teach some graduate courses, and to pay them from student tuitions. Because of the way the university is set up this can only be done by offering courses at off-campus locations through Continuing Ed. **The board members from CADENCE and from FLIR said that they had facilities that could satisfy the requirement.**

2. Department Scholarships:

The Chairman reviewed the departmental scholarship funds. Essentially there was only one, the John W. Dunfey Jr. endowed scholarship, that contained sufficient funds to make an award, and wondered whether it made sense to target a new scholarship for the Spring fundraiser. He also reminded the board that the only donations seen by the department were those that were specifically targeted to the department by the alumni (a very small fraction of the total). **The general feeling from the board was that it made sense to concentrate on having the alumni target their contributions to the department, and then to award scholarships directly from the department discretionary fund.**

3. College Writing Proposal:

The Chairman informed the board that he was spearheading a proposal to have the option of replacing College Writing II (a literature based writing course) with a course in technical writing. The technical writing course was eliminated from the ME curriculum over a decade ago in the drive to reduce credit hours, and technical writing and communication is now integrated throughout the curriculum. The integration of technical

writing into the curriculum is an excellent idea and the current proposal would add-to, rather than replace, the current system. **Board members who had taken the technical writing course when it was required remarked that it was the best of the three writing courses.** This surprised some faculty who thought that there had been considerable student dissatisfaction with the course in the past. **There were suggestions from the board that it could be combined with labs, and that technical editors in companies could provide input. It was remarked by board members that the format for technical reports should be consistent throughout the university.**

4. Management Minor in Mechanical Engineering.

The Chairman outlined a new management minor introduced in the Civil Engineering Dept. Essentially they allow two technical electives to be taken in the College of Management. In addition, the current CE curriculum contains two courses in engineering management that can be counted toward the minor. The Administration is pushing for similar things in the other engineering departments.

The board members were very cool to this proposal. To them it was more important that a graduate have technical competence, and that each organization liked to send its employees to their own management training programs.

The Board members thought there might be scope for an engineering management program, but that the proposed program seemed to be directed more toward an MBA program. They thought it would be desirable for the core courses in an engineering management program to be controlled by the College of Engineering, rather than the College of Management.

Management topics that would be of use to the engineer include:

- Budgeting
- Cost Indexing
- Resourcing
- Project Management
- Business Plan
- Gant Chart
- Decision Trees

5. Student/Board Closed Session.

Prof. McKelliget welcomed the student representatives to the room and outlined the structure of the student/Board sessions.

- **The objective** of the sessions was to provide current student input to our program of continuous self-assessment and improvement.

- **The general format** would involve student meetings with Board members, in the absence of faculty, at each MEAB meeting.
- **The detailed format**, including student membership was to be decided by the students and Board members.
- **A written report**, respecting student confidentiality, was to be provided by Board members to the Chair of Department.
- **Faculty Commitment.** All suggestions made by the students will be discussed in regular faculty meetings. The results of these discussions will be relayed to the students, at the latest, by the next Board meeting.

Faculty members then left the room.

The initial closed session was scheduled to last for 45 mins. (to be followed by an address by the Chancellor), but by unanimous vote was extended by an hour. Written report to be attached.