The Henry Samueli School of Engineering
Faculty Meeting
May 27, 2003


Also Present: M. Armentrout, R. Cassidy, B. Harnick-Shapiro, S. Herold, J. Holstein, V. Kirkpatrick-Pilger, L. Rehbaum. J. Romine.

1) Call to Order 11 AM: Professor Farghalli Mohamed, Faculty Chair

2) Approval of Agenda: Agenda Approved

3) Approval of Minutes: Minutes from January 30, 2003 meeting approved.

4) Announcements: Professor F. Mohamed, Faculty Chair

New Members of Senate Committees 2003-04:
- Committee on Committees: Professor Farghalli Mohamed
- Graduate Council: S. Ritchie
- Council on Research & Travel: F. Jabbari
- Council on Academic Personnel: R. Rangel

5) Dean’s Report: Professor Nicolaos G. Alexopoulos, Dean

- School is doing well. Both a campus and community recognize the successes as well. Enrollments are increasing and the quality of the students both on the undergraduate and graduate level has gone up.
- Extramural funding is slowing down because of the downturn in the economy but hopeful economy will strengthen in near future, State funded research may be lower by end of year.
- Target for school is 1000 graduate students and 100 faculty; all students supported by either an RAship, a TAship, or a fellowship. Goal is to create an endowment for graduate fellowships.
- Planning stage for a new building moving forward, site is currently being discussed. School would like to locate new E# building where three small SICS buildings are now located. This proposal still requires approval. Once funding and plans for E3 are underway the School will put in a proposal for E4 to be sited where the ECT are located.
6) Proposal to Create an Engineering Honors Program: Professors S. Atluri and W.A. Sirignano

An Honors Committee was appointed by the dean to determine whether the School would benefit from a HSSoE Undergraduate Honors Program and if so determined to develop a proposal for the creation of an Honors Program in Engineering. The committee members are Professors S. Atluri, Committee Chair, J. Brody, Campus-Wide Honors Advisory Board, G. Kassab, Chair of HSSoE Undergraduate Studies Committee, F. Mohamed, Undergraduate Studies Committee, A. Regan, W. Sirignano, A. Stubberud.

From the top 1000 HSSoE freshman applicants accepted in 2002 only 8% enrolled (80). HSSoE undergraduates have less class contact hours than students at many of the leading engineering schools. The Committee concluded that there is an opportunity to attract better undergraduates to our School and to teach them more. The Committee assumes some students will be attracted to a program that gives them greater breadth and depth.

A proposal to create a HSSoE Undergraduate Honors Program was drafted and presented by Professor Sirignano on May 6, 2003 to the HSSoE Undergraduate Studies Committee. On May 13, 2003 the Undergraduate Studies Committee met to review and discuss the proposal.

Program Goals and Impact: Attract more highly qualified students and increase the yield of these highly qualified students to 160 or more, challenge the most talented engineering students, attract the enthusiastic participation and support of the most talented engineering faculty. Additional faculty and operating funding will be required. The Chancellor and the Dean are supportive. Management of the Program would be by an interdepartmental Standing Committee and the Dean of the School.

An overview of the proposed curriculum was presented. Copy of proposal can be found in attachment.

Required Actions:
• Approval of proposal by Faculty
• Dean appoints Standing Committee for Undergraduate Honors June 2003
• Secure new course approvals Summer/Fall 2003
• Negotiate with Physics Department for approval for students to bypass 7A, 7B courses Summer 2003
• Approval of program by Campus Honors Program (CHP) Summer 2003
• Approval for 3 new courses to meet campus breadth sequence Fall 2003
• Place in catalog and advertise December 2003

Motion: "The HSSoE faculty approve the Undergraduate Honors Program plan outlined in April 24, 2003 report of the Undergraduate Honors Committee and recommend that implementation of the plan should begin".

General discussion followed and the Motion seconded.
Vote:  Approve  35, No 0, Abstain 0.

7) Proposal to create a School of Design:  Professor W. Sirignano

The Academic Senate is deliberating on its recommendation that will accompany the Design School proposal on its route to the Assembly. It is expected to be a neutral to negative recommendation. Professor Taylor made a "town-hall" presentation of the concept more than a year ago. The Engineering and the School of the Arts faculty in the audience were uniformly negative or skeptical. Since that time, there has never been a presentation before the School of Engineering faculty or, to the best of my knowledge, before any other School faculty. This proposal therefore has not been openly discussed in the same manner that the Law School proposal was discussed. The Law School Committee made individual presentations to Humanities, Social Ecology, and Social Sciences, who were the most concerned and potentially the most impacted schools. The Design School proposal process should have met the same standards.

Here are some reasons for being very negative about the creation of a School of Design.
1. Firstly, it must be understood that Design is essential to engineering practice and to the engineering education. The word root for engineer is shared with "ingenuity" which implies an ability to contrive or, in other words, to design. The purpose of the engineering profession is to design and to do those things that lead to or support design (e.g., research and development that precedes design, evaluation and testing of a proposed design, and manufacture or produce the designed entity). Furthermore, an undergraduate engineering program can be accredited only if a substantial portion of the curriculum focuses on design.
2. While design is essential to Engineering schools at all major universities, the greatest impact on the industry and on practical designs comes from engineers in academia, government, and industry who are experts immersed in some engineering discipline that is essentially an applied science (e.g., computer architecture, embedded systems of various types, structural engineering, chemical processing, and jet propulsion). Much more impact on design comes from engineers who focus on one of these applied sciences rather than on the science of design. That is, the methodology of design does not suffice as the condition for creativity. The command of knowledge in the applied science is more relevant to creativity.

General discussion took place.

Co-submitters of Motion:
N. Bagherzadeh, D. Gajski, M. Shinozuka, and W.A. Sirignano

Motion:
"The Faculty of the Henry Samueli School of Engineering recommend against the creation of a School of Design. Design is an integral part of several existing schools. A higher quality and less costly program can be accomplished via cooperation amongst existing schools".

Vote:  Agree 28, Disagree 2, Abstain 1

8) Standing Committee Reports:

Undergraduate Studies Committee: G. Kassab, Chair
Applications are up and we can anticipate increased enrollments in our graduate programs for Fall 2003.

*Graduate Studies Committee: Jim Brody, Chair*

2002-03
MS. Degrees Awarded 100 (+20%)
PhD Degrees Awarded: 30 (no change)

Fall 2003
Graduate Applications: 2200 (+40%)
Expected new students: 175 – 200 (-20%)
Expected total students: 650 (+20%)
Showed chart comparing three-tern average headcount by school and engineering growth is outpacing that of other units on campus.

*Research and Travel Committee: Frank Shi, Chair - Not Present*

9) Old Business: None

10) New Business: Professor Farghalli Mohamed
Nominations for Faculty Chair and Secretary and Senate Representatives

In accordance with the HSSoE Bylaws, the Faculty Chair invites nominations form the faculty for the following positions: Faculty Chair, Secretary, and Senate Representatives (2 needed for 2003-04). Please send nominations to Brett Sanders, Secretary of the 2002-03 Executive Committee.

11) Adjourn

Respectfully submitted by Janice Holstein