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To: Phyllis Wise, Provost
Ana Mari Cauce, Executive Vice Provost
Office of the Provost, Box 351237

From: Suzanne Ortega, Vice Provost and Dean
Thomas W. Gething, Interim Associate Dean for Academic Programs

RE: Review of the Department of Mechanical Engineering

At its meeting of March 6, 2008, the Graduate School Council met with members of the team that reviewed the Department of Mechanical Engineering (Adam Bruckner, Review Committee Chair and Professor, Aeronautics and Astronautics; and Thomas Sanford, Professor, Oceanography; review committee member Mari Ostendorf, Professor, Electrical Engineering, was not able to attend) and with Matthew O'Donnell, Dean, College of Engineering, and Mark Tuttle, Chair, Department of Mechanical Engineering. The program review process included a charge meeting on February 23, 2007, between members of the review committee and administrators involved in the review. The site visit, held on March 8-9, 2007, included in-person participation by external reviewers Andrew Alleyne, Professor, Mechanical Science and Engineering, University of Illinois Urbana-Champaign, and Dianne Chong, Director, Materials & Process Technology, Boeing Corporation.

Speaking to the Graduate School Council on March 6, Professors Bruckner and Sanford outlined several findings from the Review Committee Report (submitted April 20, 2007). The primary recommendation was that the department's undergraduate and graduate programs maintain continuing status, with the next review in ten years. The committee underscored the striking progress the department has made over the 3-5 years leading up to the review. The department is moving in the right direction by most measures, although there are some matters to be addressed. Key points raised in the review are revisiting and revising the strategic plan, clarifying the composition and role of the visiting committee, assuring that student advising functions well, addressing shortages in staffing, and working to assure that all faculty, including research faculty, feel included as full members of the department. The committee voiced support for a departmental move towards a "continuous search" model in faculty hiring and for increasing Ph.D. production to a level that matches its peers. Two additional areas of concern

that reach beyond the direct purview of the department are the low faculty salaries in proportion to peers and, most significantly, the concerns about the age and state of the Mechanical Engineering Building that impedes research growth and leads to a geographically fragmented faculty. A detailed list of review committee recommendations to the department, college, and university can be found on pages 20-22 of the review committee report.

The Department of Mechanical Engineering submitted its response to the review committee report on June 18, 2007. During the Graduate School Council discussion, the chair outlined several short-term solutions the department has initiated or will launch in order to continue the department's positive trajectory. These include improvements that have been made to the machine shop, financial gifts to the department, and a new faculty hire. The unit has also taken steps in response to the review committee report to more explicitly include research faculty. The department is working with other departments to purchase equipment that can be used jointly, and the chair noted that many of the recent faculty hires collaborate on grants with faculty from outside the unit. The dean underscored that the facilities challenges are very real, and that the college is collaborating with the department to find creative, intermediate-term solutions for the time that the department's core activities remain in the Mechanical Engineering Building. The department agrees with the goal of raising Ph.D. production and feels that there is significant demand for Ph.D. graduates.

The Council unanimously recommends granting continuing status to the Department of Mechanical Engineering's degree programs, with the next review in 2016-2017. The Council commends the department's actions that have driven a significant upward trend in the last five years in spite of the facilities and other constraints. Council members support creative efforts to find intermediate solutions to the facilities challenges. Council also recommends reconstituting the advisory board into a strategic group that includes both academic leaders and industry representatives that can serve as a resource for strategic planning and for plotting research directions. The department should continue its work to integrate all of its faculty as colleagues who will contribute to the department as a whole.

cc: Matt O'Donnell, Dean, College of Engineering
 Mark E. Tuttle, Chair, Department of Mechanical Engineering
 John D. Sahr, Associate Dean, Undergraduate Academic Affairs
 David Brown, GPSS President
 Mechanical Engineering Review Committee
 Graduate School Council
 David Canfield-Budde, Academic Program Specialist, The Graduate School