March 11, 2014

Gregory Fenves  
Executive Vice President and Provost  
The University of Texas at Austin  
MAI 201  
Campus Mail Code: G1000  

Dear Dr. Fenves:

Enclosed for your consideration and action is a proposal to change the Electrical Engineering Degree Program in the Cockrell School of Engineering chapter of the Undergraduate Catalog, 2014-2016 (D 11403-11406). On March 10, 2014, the Faculty Council approved the legislation on a no-protest basis. The proposals were classified as being of exclusive application and of primary interest only to a single college or school. The authority to grant final approval resides with UT System.

Please let me know if you have questions or if I can provide other information concerning these items of legislation.

Sincerely,

[Signature]

Dean P. Neikirk, Secretary  
General Faculty and Faculty Council

DPN:d1r

Enclosure

xc: William Powers Jr., president  
Charles Roeckle, deputy to the president

ec (letter only): Sharon Wood, interim dean, College of Liberal Arts  
Alison Danforth, manager, IMA  
Brenda Schumann, associate registrar  
David Laude, senior vice provost, via Kati Pelletier
DOCUMENTS OF THE GENERAL FACULTY

CHANGES TO PROPOSAL D 10882-10888 THAT IMPACT THE ELECTRICAL ENGINEERING DEGREE PROGRAM IN THE COCKRELL SCHOOL OF ENGINEERING SECTION OF THE UNDERGRADUATE CATALOG, 2014-2016

Interim Dean Sharon Wood in the Cockrell School of Engineering has filed with the secretary of the Faculty Council the following changes to the Cockrell School of Engineering section in the Undergraduate Catalog, 2014-2016. On March 28, 2013, the faculty in the Department of Electrical and Computer Engineering approved the proposal; the college faculty and the dean approved it on April 1, 2013, and April 8, 2013, respectively. The secretary has classified this proposal as legislation of exclusive application and of primary interest only to a single college or school.

The Committee on Undergraduate Degree Program Review recommended approval of the change on February 26, 2014, and forwarded the proposed changes to the Office of the General Faculty. The Faculty Council has the authority to approve this legislation on behalf of the General Faculty. The authority to grant final approval on this legislation resides with UT System.

If no objection is filed with the Office of the General Faculty by the date specified below, the legislation will be held to have been approved by the Faculty Council. If an objection is filed within the prescribed period, the legislation will be presented to the Faculty Council at its next meeting. The objection, with reasons, must be signed by a member of the Faculty Council.

To be counted, a protest must be received in the Office of the General Faculty by March 10, 2014.

Dean P. Neikirk, Secretary
General Faculty and Faculty Council

CHANGES TO PROPOSAL D 10882-10888 THAT IMPACT THE ELECTRICAL ENGINEERING
DEGREE PROGRAM IN THE COCKRELL SCHOOL OF ENGINEERING SECTION OF THE
UNDERGRADUATE CATALOG, 2014-2016

Type of Change    Academic Change

1. IF THE ANSWER TO ANY OF THE FOLLOWING QUESTIONS IS YES, THE COLLEGE MUST
CONSULT NEAL ARMSTRONG TO DETERMINE IF SACS-COC APPROVAL IS REQUIRED.
   • Is this a new degree program?      No
   • Does the program offer courses that will be taught off campus?  No
   • Will courses in this program be delivered electronically? No

2. EXPLAIN CHANGE TO DEGREE PROGRAM AND GIVE A DETAILED RATIONALE FOR
   EACH INDIVIDUAL CHANGE (include page numbers in the catalog where changes will be made):
   Updating our original submission to reflect the addition of EE 460L. The course was to be included in D
   10882-10888 but was omitted prior to approval.

3. SCOPE OF PROPOSED CHANGE
   a. Does this proposal impact other colleges/schools?     No
      If yes, then how?
   b. Will students in other degree programs be impacted (are the proposed changes to courses
      commonly taken by students in other colleges)?    No
      If yes, then how?
   c. Will students from your college take courses in other colleges? No
   d. Does this proposal involve changes to the core curriculum or other basic education requirements
      (42-hour core, signature courses, flags)?    No
      If yes, explain:
      If yes, undergraduate studies must be informed of the proposed changes and their response
      included:
      Person communicated with:
      Date of communication:
      Response:
   e. Will this proposal change the number of hours required for degree completion?  No
      If yes, explain:

4. COLLEGE/SCHOOL APPROVAL PROCESS
   Department approval date: March 28, 2013
   College approval date: April 1, 2013
   Dean approval date: April 8, 2013
PROPOSED NEW CATALOG TEXT:

Program Outcomes
{No changes to this section}

Program Educational Objectives
{No changes to this section}

Portable Computing devices
{No changes to this section}

Curriculum
{No changes to this section}

Upper-division technical core areas
{No changes to this section}

Academic Enrichment Technical Core Area
{No changes to this section}

Electrical Engineering Technical Cores

Communications, Signal Processing, Networks, and Systems
{No changes to this section}

Electronics and Integrated Circuits
{No changes to this section}

Energy Systems and Renewable Energy
{No changes to this section}

Fields, Waves, and Electromagnetic Systems
{No changes to this section}

Nanoelectronics and Nanotechnology

Students in this technical core area learn about the materials and devices used in modern electronic and optoelectronic systems. Through required and electives courses, students learn about the fundamentals of charge transport and interactions with light in semiconductors. They learn about devices beginning with diodes and transistors, the building blocks of integrated circuits, and extending to photodiodes, semiconductor lasers, photodetectors and photovoltaic devices. They learn about microelectronics fabrication techniques. And they are introduced to quantum mechanics, particularly as it applies to electronic and optoelectronic materials and devices. Students may also explore device applications through digital and analog circuit design. With exposure to the topics in this area, students are well positioned to work in a wide variety of fields that rely on semiconductor devices, such as computers, telecommunications, the automotive industry, and consumer electronics.

Students complete the following:
1. Electrical Engineering 325, Electromagnetic Engineering
2. Electrical Engineering 339, Solid-State Electronic Devices
3. Core laboratory course: Electrical Engineering 440, Integrated Circuit Nanomanufacturing Techniques
4. Core mathematics course: Mathematics 427L, Advanced Calculus for Applications II
5. Four courses from the following list:
   Electrical Engineering 334K, Quantum Theory of Electronic Materials
   Electrical Engineering 438, Fundamentals of Electronic Circuits
   Electrical Engineering 338L, Analog Integrated Circuit Design
   Electrical Engineering 347, Modern Optics
   Electrical Engineering 348, Laser and Optical Engineering
Electrical Engineering 360S, *Digital Integrated Circuit Design*
Electrical Engineering 339S, *Solar Energy Conversion Devices*
Electrical Engineering 460L, *Introduction to VLSI Design*

{No other changes are proposed}