To: Administrative Boards of the College of Arts and Sciences and the General College
From: Nancy Allbritton, Chair, and Richard Goldberg, Director of Undergraduate Studies, Joint
Department of Biomedical Engineering,
Re: Curriculum changes for BME track
Date: October 10, 2014

We propose the following changes to the BME Track of the Curriculum in Applied Sciences and Engineering. As you know, we have separately submitted a proposal to move this curriculum to a new degree program, B.S. in Biomedical and Health Sciences Engineering. This proposal is still under review. To address potential confusion, we have divided our proposed changes into two categories below: those that were also included in the new B.S. proposal, and those that were not. If the new B.S. is subsequently implemented, we propose to make all of these changes to this new degree program as well.

Changes that were incorporated into the new B.S. degree proposal:
- Replace PHYS 351 (Electronics I) with BMME 350 (Electronics for Biomedical Engineers).
- Replace PHYS 352 (Electronics II) with BMME 351 (Human Physiology and Biological Measurements for Engineers). Please note that the official course submission for BMME 351 is also currently under review. The class will be taught in spring 2015 as BMME 490 Special Topics.
- Our computer science requirement is currently fulfilled by taking COMP 110, 116, 401, or PHYS 331. Limit this requirement to taking only COMP 116

These new classes BMME 350 and 351 cover some similar content as the Physics classes that they replace. However they have increased focus on applications in biomedical engineering so they are more appropriate for our students.

For the computer science requirement, we request this change because COMP 116 is the most relevant of these classes for our students. In this class, students use the Matlab or Python programming languages to learn numerical computation, while also gaining general skills in computer programming. This class provides our students with essential skills, and they will subsequently use Matlab or Python programming in other courses in our curriculum or in research projects.

Changes that were not incorporated into the new B.S. degree proposal:
- Our statistics requirement is currently fulfilled by taking STOR 435, 455 or BIOS 600. We propose to limit this requirement to STOR 435 or 455

We request the above change because BIOS 600 is intended for Public Health students who have little background in mathematics, so it is not appropriate for our students. The remaining courses in the STOR program are more appropriate for the mathematical background of our students.