



March 3, 2016

To: HSSEAS Faculty Executive Committee

From: Jonathan P. Stewart, Chair, Civil & Environmental Engineering *Jonathan Stewart*

Subject: Proposed curriculum revisions for Civil Engineering B.S. degree program

The purpose of this memo is explain the curriculum revisions being proposed for the Civil Engineering B.S. degree program.

The first change to the curriculum is elimination of two upper-division requirements, which is motivated by the UCOP Major Requirements Program, and the internal HSSEAS desire for each degree program to require only 180 total units. These initiatives are intended to improve four-year graduation rate. In response to the evaluation of the Civil Engineering curriculum, we are electing to (1) eliminate MAE 182A as a required course, and (2) reduce from nine to eight required major field elective courses. Our motivation for removing MAE 182A is that this course has significant overlap with Math 33B (students surveyed indicated as much as 80% overlap). Furthermore, the MAE Department is proposing to eliminate MAE 182A, and replace it with a lower-division course instead. Hence, this course will likely no longer be available for our students to take beginning Fall 2016. Our motivation for reducing the number of major field electives is that we believe this is the most straightforward way to reduce our required number of units to the desired level.

The second curriculum change is introduction of a 2-unit dynamics course, CEE 102. We have been offering CEE 101 as statics and dynamics, but the statics portion of this course has been occupying a significant fraction of the quarter, leaving an inadequate amount of time for dynamics. Separating these two important topics will improve the quality of instruction.

The third curriculum change is that we are adding two courses, CEE C105 and C106 as major field elective options under the "Civil Engineering Materials" heading. Assistant Professor Mathieu Bauchy has introduced these courses, which align with our Department's strategic plan to strengthen our presence in this area.

Finally, we are electing to allow our students to take either Math 33B, or the new MAE course that will replace MAE 182A (called MAE 9X in the proposed curriculum).

These curriculum revisions were approved unanimously by our faculty on March 3rd, 2016.