

November 30, 2023

TO: HSSEAS Faculty Executive Committee

FROM: Jeff Eldredge, Professor and Department ABET Coordinator
Mechanical & Aerospace Engineering

RE: Support for change to the school-wide Ethics requirement for Mechanical Engineering and Aerospace Engineering majors

This memo expresses the support of the Mechanical & Aerospace Engineering Department for the proposed change to the HSSEAS-wide Ethics requirement for B.S. candidates. The proposed change will allow our B.S. students to take Engineering 2 to satisfy this requirement (with a C grade or better). In a recent MAE Department faculty vote on this proposed change, the results were 19 in favor, 0 opposed, and 1 abstain.

Currently, Bachelor of Science candidates in Mechanical Engineering and Aerospace Engineering can satisfy both the school-wide Engineering Writing and Ethics requirements by taking one of the ethics classes, Engr 181EW, 182EW, 183EW, 185EW. Due to student dissatisfaction with these classes, and our general objective to incorporate these requirements more seamlessly into our curriculum, we have sought an alternative pathway for our students to satisfy Ethics. Engineering 2 (Technology and Society) provides a 2-unit course that addresses ethics and societal impacts of engineering, and we believe this course will address our students' needs. However, we need to make two notes.

First, Engineering 2 is only 2 units, so it appears that we are reducing the amount of ethics content in the curriculum. However, students will get more exposure to ethics and societal impacts in our regular curriculum. We have created an initial list of existing courses in our ME and AE curricula (<https://teagle.seas.ucla.edu/content-outcomes/>) that contain societal impacts and ethics content, including our capstone design classes. This list will grow as we articulate more of this content in our curriculum. The list comprises both required and elective courses. By virtue of their normal curriculum, ME and AE students will always take at least one class from this list (and more likely, two or three).

Second, the other ethics classes (Engr 18xEW) satisfy the Writing II requirement, whereas Engr 2 does not. However, two of our faculty (Profs. Adrienne Lavine and Neil Lin) have developed a Writing II component of our required Engineering Laboratory class, MAE 157. This component has been developed in consultation with the UCLA Undergraduate Writing Center and adheres to the Writing II requirements. The version of MAE 157 with this component is called MAE 157W and is 6 units (i.e., 4 units for the laboratory, 2 units for the

writing component). A student who earns a C grade or better in 157W will satisfy the Writing II requirement. Thus, students who take Engineering 2 will also take be advised to take MAE 157W. We anticipate that we will eliminate the non-Writing II version of MAE 157.