

October 3, 2012

To: Amit Kanvinde, Chair
College of Engineering Undergraduate Educational Policy Committee



From: Ahmet Palazoglu, Chair
Department of Chemical Engineering & Materials Science

RE: Request to both discontinue and close the Chemical Engineering/Materials Science dual major

The faculty of the Department of Chemical Engineering & Materials Science (CHMS) met September 27, 2012 and voted unanimously to both close and discontinue the Chemical Engineering/Materials Science (ECHM) dual major housed in the department. We request the closure apply to both new undergraduate admissions of freshmen and transfer students as well as to currently enrolled students who might seek transfer to the major. We now ask the COE UGEP committee to give their approval. This request is based on 1) the continuing low numbers of students graduating in this major and 2) the presence of the new Materials Science minor, which would allow students to complete a Chemical Engineering major with a Materials Science minor. As is described in more detail below elimination of the major would cause no harm to students and would free up some resources.

PPM 200-25, Section III-B, requires that six points be addressed in order to discontinue a program. Here are our responses to the six points:

1. Justification and impact: Although the dual major has been successful in attracting students (typical freshman application numbers over recent years exceed 40 per year, with an average of 10-12 enrolling), the graduation rate in this major is noticeably lower (ranging from 4 to 7 per year in the last five years). The attrition is believed to be due to the high unit requirements and rigidity in the program requirements, coupled with the lack of ABET accreditation. Many students who originally enroll in the dual major eventually switch to the simpler, accredited Chemical Engineering major before they graduate.

Existing students in the major will be allowed to complete their course of study; some students early in the program might wish to transfer to a major in Chemical Engineering with a minor in Materials Science (this minor has recently been approved).

Closing the major would have no negative impact on the campus given the low numbers. No courses would be eliminated, as the dual major consists entirely of courses already offered in the CHMS department. All of these courses would continue to be offered. There are no courses dedicated solely to this major.

There would be a small positive impact to the department as with elimination of the major the associated time and resources required for advising of the major would be eliminated. There will be a small savings in the student adviser (SAO) time as s/he over time will not need to maintain upkeep of the major and will be able to focus on the remaining majors that CHMS offers. Overall the workload in CHMS faculty and staff time will be reduced.

There are no effects on space utilization and no positions will be reduced or eliminated due to the closure and discontinuance of the major.

Closing and discontinuing the major would also help in our ABET accreditation process, since we (the Department of Chemical Engineering and Materials Science) would no longer offer any degree programs that are not ABET accredited.

2. Phase-out plan: The students in the program at this time will be allowed to complete the dual degree. Any new students admitted before closure will also be allowed to complete the degree if they so desire. Since no unique courses are required it should not be difficult to allow students in the pipeline to complete the coursework required for their degrees. The SAO will work with the students to ensure that they are aware of and fulfill all their degree requirements.

There are no accommodations needed for faculty, non-senate academic appointees, or staff, as the number of students involved is so small and no courses or positions will be reduced or eliminated.

3. Steps needed and timetable: First we need COE Executive Committee approval, after which the remaining step is for the Academic Senate to give its approval to closing and discontinuing the major. We request that these steps be done as soon as possible. If the incoming Fall 2013 class includes dual majors, and they finish in four years, the last students will graduate in June 2017. An exact timetable is hardly needed as no unique courses are required for the dual major. Even if students take until 2018 to graduate there is little impact to the department, other than the SAO working with the students to make sure that all necessary courses are completed.

4. Consultation: The dual major teaching faculty discussed the discontinuation at length and the matter was discussed with the entire CHMS faculty before the unanimous vote to discontinue and close. There would be no impact on other majors or departments as no courses will be eliminated.

5. Relationship to the Academic Plan: The most recent CHMS Academic Plan, a 22 page document, makes only one explicit mention of the dual major. The bottom line is that the major is small and its discontinuance will have no overall impact on a department with over 500 undergraduates and other majors offered.

6. Comments: The faculty unanimously approved the plan for closure and discontinuance. Professor Ron Phillips, Chair of the department's Undergraduate Affairs Committee, offered these comments:

“The Department of Chemical Engineering and Materials Science now offers a minor in Materials Science. When students can choose a major in Chemical Engineering and a minor in Materials Science, it seems unnecessary to have a separate degree called Chemical Engineering and Materials Science. In addition, the fact that the joint degree is unaccredited by ABET complicates the accreditation process for the other programs. ABET is very sensitive about offering both accredited and unaccredited majors, and has strict rules to ensure that students are well-informed about the status of their major. Adherence to those rules was the sole "Concern" that remained for Chemical Engineering after the interim ABET review in 2009.”