DATE: October 27, 2006

TO: Terryl W. Hallquist, Chair, Committee on Educational Programs (CEP)

FROM: David A. Weintraub, Director, Interdisciplinary Program in the Communication of Science and Technology (CST)

and

CST Steering Committee:
   C. Richard Chappell, Physics & Astronomy;
   Jay Clayton, English (Chair);
   David Ernst, Physics & Astronomy;
   Jonathan Gilligan, Earth & Environmental Sciences;
   Richard Haglund, Physics & Astronomy;
   David Hercules, Chemistry;
   Kassian Kovalcheck, Communication Studies;
   Leah Marcus, English (Acting Chair);
   Chris Rowe, College of Engineering;
   Jeffrey Schall, Psychology;
   John Sloop, Communication Studies (Chair);
   Bob Stammer, College of Engineering;
   Gerald Stubbs, Biological Sciences

CC: Kate Daniels, Associate Dean, College of Arts & Science

SUBJECT: revision of rules for the interdisciplinary CST major

The Steering Committee for the CST program has unanimously endorsed three proposed changes to the rules for the CST major. We believe these proposed changes both strengthen the major and make it more flexible. In addition, these rules changes will make the program much easier to understand and will make advising, planning, and auditing a program less complicated (We have consulted with Registrar and Director of Records Beth Rogers and have determined that these rules, if approved, can be implemented within the new Student Audit system).

Please refer to pages 217-219 in the 2006-2007 Course Catalog for the current program rules.

The three proposed changes are presented and explained below.

1. We propose to make the Natural Science requirement more flexible. We propose that the new Natural Science requirement be, simply,

   Any three 200-level courses (minimum three credit hours per course) from at least two disciplines in the natural sciences from those listed for credit as MNS courses within AXLE. (Note that MATH courses cannot be used to fulfill this requirement.)
Explanation: The current list of approved courses, which includes only 33 courses out of all the courses offered in Astronomy, Biological Sciences, Chemistry, Earth & Environmental Sciences, Physics and Psychology, was effectively a guide to natural science courses that have a minimum of pre-requisites; the Steering Committee, however, sees no reason to preclude permitting students with appropriate skills or AP credits to choose from a far broader and deeper set of courses, including all the advanced courses in the natural sciences. Courses taught by natural science departments that have been placed in areas other than MNS in AXLE (e.g., ASTR 203, PHYS 238, GEOL 205, BSCI 273) are appropriately excluded from the courses that would satisfy this requirement. The ‘minimum three credit hours per course’ stipulation ensures that all three courses are regular, full-credit courses. This wording is also meant to permit a student to take one or more four-hour courses (e.g., PHYS 225A). Students would only count nine hours of Natural Science courses toward this part of the 48 hour requirement, even if they choose to take three four-hour courses.

2. We propose to make the Engineering requirement more flexible and parallel with the Natural Science requirement:

Any three courses (minimum three credit hours per course) from at least two disciplines in the College of Engineering (excluding BME 201, 240a-b, 241a-b, 272, 273; ChE 233W, 246, 247, 249; CE 200a-b-c, 248a-b, 252a-b; CS 101, 103, 240a-b; EECE 203, 204, 296, 297; ES 101, 103, 248a-b; MSE 209b-c; ME 209a-b-c, 243, 297).

Explanation: Instead of choosing from a very short (14 courses) list of Engineering courses, several of which are no longer offered and many of which have been renumbered and/or renamed, majors should be eligible to take any three courses (minimum three credit hours per course) from at least two disciplines from the College of Engineering, with the exception of a few excluded courses (see explanation for exclusions, below).

The approved list of Engineering courses was motivated by identifying for A&S students courses that have very limited prerequisites and sometimes had some ‘society’ component; however, the point of the requirement is to ensure exposure of CST majors (including double majors from Engineering) to the discipline and culture of engineering, which has significant differences from the world of science. To accomplish this, the Steering Committee finds no reason to limit students’ choices other than to preclude a few select courses that would not meet the intended goal of this requirement. The ‘minimum three credit hours per course’ stipulation insures that all three courses are regular, full-credit courses (i.e., two four-hour courses with labs plus a one-hour seminar would not meet the nine-hour requirement). This wording is also meant to permit a student to choose to take a four-hour course (e.g., MS 150), which is currently precluded by the rules, though many students seek and receive a waiver in order to take MS 150. Students would only count nine hours of Engineering courses toward this part of the 48 hour requirement, even if they choose to take one or more four-hour courses. In consultation with the College of Engineering, we have excluded courses that are not appropriate for non-Engineers mainly due to their design/research components or their exclusivity to Engineering students; a small number of courses are also excluded because the engineering component of the course is not substantial enough (BME 201) or are oriented more toward mathematics (CS 101, CS 103) than engineering.

3. In the list for Area II of Selected Courses, this two-course requirement should be changed from (effectively) “two from English 118W, 120W, 200, 201, 243 or other appropriate courses in English” to
ENGL 200, 201, or any 200-level W course taught in English, Engineering, or any of the Natural Science departments.

Explanation: This requirement is intended to ensure that majors take a total of at least two courses that focus intensively on writing, in addition to English 118W or 120W. The new rule would require that students take two writing-intensive courses at the 200-level rather than English 118W and English 120W and only one writing-intensive course at the 200-level. The current list is too restrictive, since 200 and 201 are rarely taught and 243 has been taught less often than many other courses. In addition, as a result of the implementation of the new AXLE curriculum, we anticipate that science and engineering disciplines may soon offer 200-level W courses, and such courses would be very appropriate for students in this program.

Note that although ENGL 200 and 201 have not been taught for several years, English Department Chair and CST Steering Committee member Jay Clayton expects those courses to be taught again in the near future. Hence, after careful consideration of a proposal to remove these two courses from the options (because listing courses that are not regularly taught tends to generate confusion and some frustration among students), we have at this time opted to retain them. If the status quo remains unchanged, we will revisit this decision in a year or two.