Dear Prof. Tsu-Chin Tsao,

We are proposing to change the approved courses for the Environmental Engineering minor. The current language describing the course requirements for the Environmental Engineering minor is:

The Environmental Engineering minor is designed for students who wish to augment their major program of study with an exposure to engineering methods applied to key environmental problems facing modern society in developed and developing countries. The minor also provides students with a brief experience and understanding of the roles that environmental engineering methods play in solving environmental problems.

To enter the minor, students must be in good academic standing (2.0 grade-point average or better) and file a petition in the Office of Academic and Student Affairs, 6426 Boelter Hall.

Required Lower Division Course (4 units): Mathematics 3C or 32A.

Required Upper Division Courses (24 units minimum): Civil and Environmental Engineering 153 and five courses from:

Atmospheric and Oceanic Sciences 104 (acceptable as substitute for C&EE 153, but not in addition to C&EE 153), 141**
Civil and Environmental Engineering 110, 150, 151, 152, 154, 155, 156A, 156B, 157A, 157B, 157C, 157L, C159,163**, 164, M165, M166,
Chemical Engineering 100, 101A, 101B, 101C, 102A*, 102B, 106, 113, C118, C119, C140
Earth, Planetary, and Space Sciences 101, C113
Environment M114, M134, M153, 157, 159, 166
Environmental Health Sciences C125, C152D, C164
Mechanical and Aerospace Engineering 82***, 103, 105A*, 105D, 133A, 136, 150A, 174, 182B, 182C

*Credit for both MECH&AE 105A and CH ENGR 102A will not be granted.
**Credit for both A&O SCI 141 and C&EE 163 will not be granted.
***Credit for both MECH&AE 82 and MATH 33B will not be granted.

A minimum of 20 upper division units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor, and at least 16 units applied toward the minor must be taken in residence at UCLA. Transfer credit for any of the above is subject to departmental approval; consult the undergraduate counselors before enrolling in any courses for the minor.

Each minor course must be taken for a letter grade, and students must have a minimum grade of C (2.0) in each and an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

The revised language, reflecting the changes in the course requirements is (changes highlighted):

The Environmental Engineering minor is designed for students who wish to augment their major program of study with an exposure to engineering methods applied to key environmental problems facing modern society in developed and developing countries. The

minor also provides students with a brief experience and understanding of the roles that environmental engineering methods play in solving environmental problems.

To enter the minor, students must be in good academic standing (2.0 grade-point average or better) and file a petition in the Office of Academic and Student Affairs, 6426 Boelter Hall.

Required Lower Division Course (4 units): Mathematics 3C or 32A.

Required Upper Division Courses (24 units minimum): Civil and Environmental Engineering 153 and five courses from:

Civil and Environmental Engineering 110, 150, 151, 152, 154, 155, 156A, 156B, 157A, 157B, 157C, 157L, C159,163, 164, M165, M166
Chemical Engineering 102A*
Mechanical and Aerospace Engineering 103, 105A*

*Credit for both MECH&AE 105A and CH ENGR 102A will not be granted.

A minimum of 20 upper division units applied toward the minor requirements must be in addition to units applied toward major requirements or another minor, and at least 16 units applied toward the minor must be taken in residence at UCLA. Transfer credit for any of the above is subject to departmental approval; consult the undergraduate counselors before enrolling in any courses for the minor.

Each minor course must be taken for a letter grade, and students must have a minimum grade of C (2.0) in each and an overall grade-point average of 2.0 or better. Successful completion of the minor is indicated on the transcript and diploma.

The rationale for these changes, which remove course options from outside the college of engineering, and focuses students on classes offered by the civil engineering department, is that the previous minor requirements enabled students to obtain a minor in Environmental Engineering by taking only a single class (CEE 153) from the Environmental Engineering department. This led to students who are under-prepared and lack basic understanding in the areas of water treatment, water resources, and environmental remediation. Therefore, we wish to narrow down the classes available for the minor, focusing on offerings from Environmental Engineering. A fluid mechanics class from Mechanical Engineering (103) and thermodynamics classes from the Mechanical (105A) and Chemical (102A) Engineering departments.

Thank you,
Professor Ertugrul Taciroglu
Chair, Department of Civil and Environmental Engineering
University of California, Los Angeles