

November 3, 2017

Sandra Graham
Chair, UCLA Academic Senate

RE: Proposed Revisions to Senate Regulation 424.A.3 (Area D)

Dear Sandra,

Thank you for allowing the Committee on Undergraduate Admissions and Relations with Schools the opportunity to review and comment on the proposed revisions to Senate Regulation 424.A.3 (Area D), which will impact UC admission eligibility for students applying to matriculate as freshmen. Unfortunately, there are a number of concerns that prevent CUARS from endorsing the proposed revisions as they are currently written. Below we enumerate the concerns raised by members of CUARS.

1. **Fundamental Core Disciplines:** Although the stated aim of the proposed change is to align UC admissions with the Next Generation Science Standard Course Models, the proposed change fails to make substantial progress in achieving this goal. The Next Generation Science Standards (NGSS) are divided into four areas: (1) Physical Science, (2) Life Science, (3) Earth and Space Sciences, and (4) Engineering, Technology, and Applications of Science. While the proposal may diversify the curriculum which could be used to satisfy a third year of science coursework, it still gives primacy to Biology, Chemistry, and Physics; and does little to encourage students to take courses in the other areas listed in the NGSS. Even the composition of the system-wide taskforce—which did not include any experts in the arenas of Earth and space sciences—demonstrates an adherence to old standards and conceptions of what are considered to be ‘fundamental/core disciplines’, to use the wording from the proposal. While the additional year is intended to be more inclusive, it in fact does nothing to incentivize student participation in areas other than Biology, Chemistry, and Physics, two of which are still required. While some members felt the broadening of subjects which are able to satisfy the requirement was a worthwhile effort, other members had concerns that some of the applied sciences, such as programing, may not be appropriate options, as many applied science courses do not focus on the core principles of scientific inquiry, or do not incorporate elements of the scientific method, which requires the gathering of evidence and evidence-based learning activities.
2. **From Laboratory Science to Science:** CUARS members also raised concern over the removal of the word laboratory from the Area D requirement. In the proposal, the term laboratory

science seems to be narrowly construed. The committee believes that the term laboratory should not be removed, rather it should be more broadly defined. It should be made clear that laboratory work does not just occur at a bench. Courses should require evidence-based learning activities where students make observations by gathering data themselves in order to arrive at reproducible conclusions through systematic inquiry. Schools need to be encouraged to create active learning environments, and the removal of the term laboratory seems to be step backwards in this effort. The committee understands that concerns about access have driven the inclusion of online courses for students from under-resourced schools to satisfy the expanded Area D standard. However, multiple committee members do not believe online courses can replace traditional classroom, laboratory, and field environments where students actively engage with peers and instructors to formulate hypotheses and gather evidence to test those hypotheses.

3. Disparate Impact of Requiring three Science Courses for UC Eligibility: In terms of impact, the proposal states that because 95% of UC applicants already take more than the two years currently required for UC eligibility the impact would be minimal. However, if 95% of UC applicants already take three science courses, one might ask why is there a need to change the Area D requirement? There appears to be a risk that doing so would disproportionately impact eligibility among underrepresented students. The committee was concerned that approximately 60% of students in the 5% of students who would not be eligible under the new standard are underrepresented minorities. Access to three or more science courses is an equity and access issue. While the state's science curriculum framework includes specific guidance to educators about building and expanding technology resources and network infrastructures to increase access to learning opportunities, CUARS believes these resources and infrastructure should be in place before any change to our eligibility policy takes place—not after. Simply put, we do not believe it is equitable or right to exclude thousands of applicants as their schools attempt to 'catch up' and develop their infrastructure and curriculum to meet these new standards.

Thank you again for allowing our committee the opportunity to respond to these proposed changes. If you have any questions or concerns, please do not hesitate to contact me.

Sincerely,

Anna Lau
Chair, Committee on Undergraduate Admissions and Relations with Schools