

## ABSTRACT

The purpose of UC Santa Cruz's SEMILLA Remote Learning project is to expand and adapt three activities in the SEMILLA (Science Education & Mentorship in Latino Lives in Academia) project, *designed to interrupt STEM attrition patterns and social reproduction rooted in both the under-preparation of students and the under-preparation of UCSC to serve Latino and low-income STEM students*. The remote learning activities target students passing STEM gateway courses in mathematics, chemistry, biology, computer science, and engineering that predict persistence through majors to graduation.

The three grant activities that will be adapted to accommodate for remote learning and instruction are:

1. PreCalculus Academy in Remote Learning (previously called the College Math Academy in the original SEMILLA Project);
2. Individual and Embedded Tutoring in gateway STEM courses; and
3. Collaborative Teaching and Learning for Academic Skill and Career.

### SEMILLA Remote Learning Project Goals and Objectives

- **PreCalculus Academy in Remote Learning.** For the Winter 2021 cohort, Latina/o or EOP (UCSC Educational Opportunity Program, a proxy for low-income) students in PreCalculus Academy in Remote Learning will have higher pass rates compared to Latina/o or EOP students who took PreCalculus in Winter 2021 but did not participate in PreCalculus Academy.
- **Individual and Embedded Tutoring in Gateway STEM Courses.** Latina/o or EOP Students who use Learning Support Services (LSS) tutoring will pass their gateway STEM class at higher rates than the Latina/o or EOP students in gateway STEM classes who do not use LSS tutoring services.
- **Collaborative Teaching and Learning for Academic Skill and Career Development through the Academic Excellence Program (ACE).** For the Summer 2021 remote implementation of ACE, Latina/o or EOP students will pass their STEM gateway class at higher rates than the non-ACE Latina/o or EOP students. ACE recruits students underrepresented (URM) in STEM, including Latina/o and/or EOP students. For decades, ACE students who are EOP or URM have outperformed non-ACE peers from the same demographic groups in ACE-supported courses. In 2019-20, compared to non-ACE EOP/URM students, EOP/URM ACE students earned about 23% more A grades and about 50% less non-passing (D or F) grades. These trends held in quarters when ACE implemented 100% remote sessions.

The SEMILLA Remote Learning project budget is \$98,246 for a 1-year period (fall 2020 – summer 2021).

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