

SCIENCE EDUCATION & MENTORSHIP IN LATINO LIVES IN ACADEMIA (SEMILLA)

Grant Year 5 | UC Santa Cruz | Hispanic-Serving Institution (HSI) Grant | U.S. Department of Education

Grant Partners

- Educational Opportunity Programs (EOP)
- Center for Innovations in Teaching and Learning (CITL)
- Learning Support Services (LSS)
- Academic Excellence Program (ACE)
- Cal-Teach
- MESA Engineering Program (MEP)
- STEM Diversity Research Programs
- Mathematics Department
- Education Department

Grant Overview

Grant Type: Title III, Part F*

Grant Active Dates October 2016 - September 2022

Grant Year 5: October 2020 - September 2021

Grant Funding Amount: \$6,188,505

Abstract

The purpose of the UC Santa Cruz SEMILLA Project (Science Education & Mentorship in Latino Lives in Academia) is to cultivate equity-minded reforms designed to challenge and overcome institutional barriers so that STEM-intended Latino and low-income students increase their rates of STEM Transfer, persistence and degree attainment.

The SEMILLA Project is designed to interrupt STEM attrition patterns and social reproduction rooted in both the lack of opportunity for students and the under preparation of UCSC to serve Latino and low-income STEM students. The SEMILLA Project will serve as focal point and catalyst for a comprehensive set of interventions guided by analysis of student outcomes and inquiring teams to address barriers both in and outside the classroom.

Identifying Student Needs

- There are high rates of attrition in STEM courses for Hispanic and low-income students
- Identified courses represent a significant barrier to Hispanic and low-income student access

Addressing Campus Needs

- Holistic STEM counselors/ Early Alert
- STEM Scholars group
- SEMILLA Scholars
- STEM Transfer Programs
- STEM Sense of Belonging
- Faculty and Teaching Assistant Professional Development
- Articulation Agreements

*Title III Part F Funding: Assist HSIs to increase the number of Latino and other low-incoming students attaining degrees in STEM and to develop a model for transfer and articulation agreements between two-year and four-year institutions in STEM.

SEMILLA INITIATIVES



SEMILLA Scholars

Students Served: 153*

A cohort model supporting incoming STEM-intended first-year underrepresented students who engage in academic/career, social, and community activities for their successful transition towards STEM major declaration and degree completion.

Transfer Programs

Students Served: 336*

STEM Transfer Program:
A 4-day virtual summer orientation designed to connect students with campus resources, staff, faculty, and academic workshops.

Academic Jumpstart:
An intensive 2-day virtual workshop implemented by the Academic Excellence (ACE) Program supporting students with foundational concepts and theories for two upper division STEM courses.

College Math Academy

Students Served: 230*

A redesigned precalculus course incorporating an active learning lecture model, collaborative learning-based discussion sections, embedded advising, and a comprehensive teaching team (instructor, TAs, tutors, and adviser).

Academic Support & Tutoring

Students Served: 6,299*

Academic support programs and tutoring services expand to serve more STEM courses through a facilitative and collaborative learning structure.

Advising



EOP STEM Counselors provide holistic STEM advising through early alerts (in partnership with instructors, TAs, and tutors), intentional outreach campaigns, and campus referrals. Counselors provided remote advising since March 2020 due to the pandemic. Counselors addressed various barriers the pandemic disproportionately created for our student population.

SEMILLA Scholars Peer Mentors serve as a support system for the SEMILLA Scholars participants, providing one-on-one peer advising/mentoring, and hosting STEM focused workshops and events. Peer Mentors provided remote mentorship since March 2020. Mentors provided community and connection to students who felt little sense of belonging to the university during remote instruction.

The STEM Hub is a dedicated space in the Science and Engineering Library utilized by the SEMILLA Scholars program, and other partners. STEM Hub Peer Advisers connected STEM students to academic and social resources, provided peer-advising, and hosted workshops focused on STEM student success - all virtually during the year of remote instruction.

Faculty & Teaching Assistant Support

Teaching and Learning for STEM Gateway Courses (TLC-STEM): The TLC-STEM group provides support to faculty teaching large-enrollment STEM courses through engaging dialogue addressing pedagogy and best teaching/assessment practices. The group hosted 12 virtual sessions addressing various topics.

Participants Served: 166*

Teaching Assistant (TA) Training: Teaching assistants for the Physical & Biological Sciences Division gateway courses participated in an online 2-day training designed to promote inclusive teaching practices and provide practical skills and resources amidst the COVID-19 pandemic/hybrid learning environment.

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*Denotes cumulative numbers from years 1-5 of the grant