



California State University, Fresno

CSU-LSAMP Program

LSAMP Research Internship

Summer 2011

Academic Year 2011– 2012



CSU-LSAMP is supported by the NSF under Grant #HRD-0802628-515291,
Office of the Provost and the California State University

SYNOPSIS OF PROGRAM

The California State University, Fresno Louis Stokes Alliance for Minority Participation (CSU-LSAMP) Program is aimed at increasing the quality and quantity of students successfully completing Science, Technology, Engineering and Mathematics (STEM) baccalaureate degree programs. The goal is to increase the number of students interested in, academically qualified for and matriculated into programs of graduate study. Fresno State CSU-LSAMP supports sustained and comprehensive approaches that facilitate achievement of the long-term goal of increasing the number of students who earn graduate/doctorates in STEM fields, particularly targeting individuals who have faced or face social, educational, or economic barriers to careers in STEM.

The CSU-LSAMP Program at Fresno State has been in existence for over 15 years and has already completed three Phases. The program will be commencing year 4 (5 year grant) of Senior Level in June 2011.

Phase I placed emphasis on aggregate baccalaureate production,

Phase II augmented the Phase I emphasis with attention to individual student retention and progression to baccalaureate degrees, and

Phase III augmented both Phase I and Phase II with attention to aggregate student progression to graduate school entry.

Senior level continues to support progression to graduate school entry and provides funding for students to participate in international experiences.

II. INTRODUCTION

The Louis Stokes Alliance for Minority Participation (LSAMP) Program is one of the National Science Foundation's (NSF) flagship initiatives for helping the nation meet its STEM workforce needs of the twenty-first century. The LSAMP Program is a multi-disciplinary, comprehensive, undergraduate program designed to increase substantially the quantity and quality of students receiving baccalaureate degrees in STEM disciplines. The long-range goal of LSAMP is to increase the number of disadvantaged students entering graduate schools who obtain doctoral degrees in STEM fields supported by NSF. To effectively carry out LSAMP goals requires the formation of coalitions among STEM leaders throughout government, industry, and perhaps most importantly academic institutions.

III. PROGRAM DESCRIPTION

The CSU-LSAMP Program based on the Fresno State campus is located in the Science building room 101 operating under the College of Science and Mathematics. The program is also supported with funding from the Provost and Vice President for Academic Affairs.

The LSAMP Program was initially focused primarily on baccalaureate production. However, as the program has matured it has placed increased emphasis on the progression of

individual students to baccalaureate degrees and entry into graduate programs of study. The LSAMP Program supports comprehensive attention to those processes and factors that promote baccalaureate attainment, preparation for graduate study, and preparation for successful careers by students within alliances. These alliances may include partners drawn from among two- and four-year higher education institutions, businesses and industries, national research laboratories, local, state and federal agencies.

Success of the LSAMP Program has been measured by its ability to cause a significant increase in the number of students who graduate with baccalaureate degrees in STEM fields. With components and program activities now in place, the program's metrics will expand to include individual student persistence to baccalaureate attainment, and entry of students into programs of graduate study.

CSU-LSAMP is supported by the National Science Foundation and also funds 22 other CSU campuses currently participating in the CSU-LSAMP statewide program.

IV. LSAMP STUDENT ELIGIBILITY AND SUPPORT

LSAMP Eligibility

Students who are eligible for CSU-LSAMP support and activities are those who meet the following criteria:

- ✦ Be a US citizen or permanent resident
- ✦ Be enrolled in a STEM discipline or have expressed an interest in pursuing a STEM baccalaureate degree at California State University, Fresno.
- ✦ Be an individual who has faced or faces social, educational, or economic barriers to careers in STEM

Program Support to Students

Fresno State CSU-LSAMP Program goals are to produce an increase in STEM graduates and the promise of long-term change in the production of new Ph.D.s and their entrance into productive faculty or research careers. The strategy for reaching these goals entails focusing efforts in the following areas:

- 1) Involving undergraduates in STEM research opportunities guided by a faculty and graduate student mentor;
- 2) Involving students in activities increasing awareness for graduate and post-graduate preparation (e.g. conferences, guest speakers, etc);
- 3) Developing alliances with members drawn from among community colleges, colleges and universities;
- 4) Incorporation of academic, curricular, and co-curricular enrichment activities designed to improve instructional performance as well as increase the motivation, performance, and progression of talented students within undergraduate degree programs and in preparation for graduate degree programs; and

- 5) Providing direct stipend support as necessary to enable students to participate in academic year, summer enrichment and extracurricular activities without unnecessary loss of income.

Faculty Mentor Support to Students

The faculty-research mentor will provide the very foundation of student academic success. The faculty mentor-student relationship will benefit both student and mentor with a feeling of mutual understanding of the desired outcome for this experience. Some of the ways faculty will contribute to the development of the student may include:

- 1) HELPING the student to gain research skills and contribute to projects that will advance current research in the discipline;
- 2) TALKING with the student about the history and foundations of the discipline;
- 3) DISCUSSING other current research, trends and disputed territory in the field;
- 4) EXPLAINING the context of individual research and research methods;
- 5) INTRODUCING the student to colleagues, potential employers, and other contacts who can expand the student's perspective and understanding;
- 6) GUIDING and critiquing the research work;
- 7) EXPOSING the student to current literature;
- 8) PROVIDING academic guidance and advancement, symposia and conferences in his or her own and related fields.

V. LSAMP 2011-2012 ITINERARY, INTERNSHIP DETAILS AND CALENDAR OF EVENTS

Summer 2011 Itinerary

- LSAMP eligible students will be recruited, identified, and selected to begin participating in summer research activities.
- Students will work with a faculty member in the science, technology, engineering or mathematics areas who will serve as research mentors. In addition, graduate students already working with the faculty in their research will be invited to take part in the mentoring and guiding of LSAMP students through the research work.
- Students will begin work on research projects and complete 160 hours within the timeframe starting **June 1st** and concluding **August 12th**. (Note: the start up dates may vary depending upon the faculty summer schedule but all summer research activity is expected to end by August 12th).
- Students will receive a **\$1,500** stipend for their research internship experience.
- Students will be expected to conduct research work **20 hours per week for 8 weeks (with flexibility)**.
- Students will be required to keep an attendance log documenting their hours that will be signed off by faculty (or graduate mentor as designated by faculty) and submit log at the end of every month.
- Students will participate in all workshops and training sessions.
- Students will participate in a GRE preparation course (see handout and also posted online on LSAMP Fresno State website).

- Students will be required to do an oral research presentation.

LSAMP 2011 Summer Calendar of Events and Important Dates. Confirmation of times and locations will be disseminated via email

LOG SHEETS AND OTHER INFORMATION WILL ALSO BE POSTED ON THE LSAMP WEBSITE:

www.csufresno.edu/lamp.

CHECK YOUR EMAIL REGULARLY.

<u>Date</u>	<u>Event/Activity</u>
Wednesday, May 25 , 2011	LSAMP Research Internship Student Orientation 10:00am-11am USU 310
Wednesday, June 1 , 2011	Students may begin to log hours for research projects; literature review and other research related work can be documented on log sheet. Specific schedule is determined between student and faculty mentor
Wednesday, June 1 , 2011	GRE preparation course – S2 319 computer lab See handout and website for details regarding dates/times. You must attend all sessions unless prior arrangement has been made with Kaplan and LSAMP.
Friday, June 10 , 2011	Research Roundtable Session – Library Research 10am-11am
Saturday, June 11 , 2011	EDGE Course – Teambuilding <i>Faculty are also invited to participate</i> 8:00am – 12:00pm (EDGE course held north of RDH) Bring waiver, appropriate attire including tennis shoes, water bottle http://www.csufresno.edu/chhs/depts_programs/recreation/about/edge.shtml
Wednesday, August 10 , 2011	Oral Research Presentations 9am – 11: 30am S2 107 – You are expected to attend the entire event
Friday, August 12 , 2011	Last day to complete summer research hours Submit summer program evaluation
	If you receive financial aid please notify our office in writing (form will be disseminated during orientation). Please note that your stipend award may impact your financial aid award received during 2011-2012, if you have any questions or concerns please see a financial aid counselor.

2011 –2012 Academic Year Notes: A detailed Itinerary including meeting dates will be provided prior to the beginning of the academic year

- Students will begin work on research projects **August 22, 2011** and conclude their academic year research requirement by **May 2012**.
- Students will be encouraged and guided to apply to present research work and *required to attend* the **31st Annual Central California Research Symposium April 2012**. (note: participation in presentation will be contingent on stage of research work)
- Students will be encouraged to complete registration to attend conferences *such as* but not limited to **SACNAS National Conference** and the **Biomedical Research Conference for Minority Students**. Students will be encouraged to apply for funding support. LSAMP may be able to support students if he/she is presenting LSAMP supported research. Prior arrangements must be made with program coordinator to determine if funding is available.
- Students may apply for the CSU-LSAMP Scholars 2012-2013 program, for continuing undergraduates, in addition to this internship. The Scholars program provides funding for students up to \$2,000 for research, travel, supplies, etc. Applications available during Spring 2012.
- Students will receive a **\$1,500** stipend for academic year research work. Generally, stipend is split during the fall and spring.
- Students will be expected to conduct 160 hours of research work (approximately **5 - 10 hours per week**) during the academic year for a total of approximately 80 hours per semester. Specific schedule must be established between the student and the Faculty Mentor.
- Students will be required to keep an attendance log documenting their hours that will be signed by faculty (or graduate mentor as designated by faculty) on a **monthly** basis and submitted to the LSAMP office.
- Students will be required to do a poster board research presentation at the end of the Spring 2012 semester.

2011 - 2012 LSAMP Academic Year Calendar of Events and Important Dates will be announced in August 2011

Monthly Roundtable sessions – **TBA** after add/drop period each semester

The California Forum for Diversity in Graduate Education – **Univ. of San Francisco Oct. 29, 2011**

Summer Enrichment Conference – Sacramento State **December 3, 2011**

The California Forum for Diversity in Graduate Education – Southern CA - **TBA**

Central California Research Symposium at Fresno State- **April 2012**

Poster-board Session – **May 2012**

VI. FRESNO STATE LSAMP CONTACT INFORMATION

CAMPUS CO-COORDINATOR

LILIA DE LA CERDA

CALIFORNIA STATE UNIVERSITY, FRESNO

2555 E. SAN RAMON, M/S SB68

SCIENCE BUILDING ROOM 101

FRESNO, CA 93740

(559) 278-4748

(559) 278-7804 FAX

liliad@csufresno.edu

CAMPUS FACULTY ADVISOR/COORDINATOR

LARRY RILEY, PH.D.

CALIFORNIA STATE UNIVERSITY, FRESNO

BIOLOGY DEPARTMENT

(559) 278-2997

lriley@csufresno.edu

NSF Support must be acknowledged on any publication (including World Wide Web pages) of any material based on or developed under this project in the following terms:

CSU-LSAMP is supported by the NSF under Grant #HRD-0802628-515291, Office of the Provost and the California State University.

NSF must be also be orally acknowledged during all news media interviews, including popular media such as radio, television and news magazines.

Disclaimer: All publications of material including World Wide Web based on or developed under this award, *except* scientific articles or papers appearing in scientific, technical or professional journals, must contain the following:

Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.