

July 22, 2021

United States Department of Education HSI-STEM Grantees webcast

Registrant Questions

**1. What activities or types of programs will get funded?**

- a. These are funded by the Department of Education. This particular set of programs support the growth of STEM graduates from Hispanic, low-income and community college transfer students.
- b. Programs that help reduce/eliminate equity gaps for Hispanic and low-income students in STEM disciplines.

**2. What are some Dos and Don'ts for dissemination?**

- a. Certainly, want to toot your successes, and especially, if there are best practices that others will benefit from it. Publishing about outcomes from experiments- both that worked and those that didn't work- would be beneficial for others to make use of. When you toot, please don't forget to give the credit to the funder.
- b. A big part of the success of the program here in California is the collaboration between grantee institutions. There is a lot that we can learn from one another given the students we serve. So, by all means, I would encourage everyone to look for opportunities to share, and engage through conferences, publications, etc.,

**3. What are best practices for implementing introductory research experiences and engaging first year students?**

- a. Starting early with an exposure to research is important, and not having to wait till they are about to graduate. Some high school students come with research experience also and look for opportunities in their first year, and so do some of the transfer students from community colleges. A discussion about research in some of the first-year courses is one approach, and recruit some by the next semester or for the summer. The important thing is to also find funding for research. Not sure about best practices.
- b. In the AIMS2 program at **CSUN** we have supported a mix of students including FTF and FTT in engineering and computer science projects. Faculty-student, and peer-peer interaction is one the most important aspects of the program. Participation in the public annual research symposium builds confidence and strengthens student success.

**4. Are under-represented groups in the APIDA community served by any of these HSI STEM programs (such as Cambodian, Hmong, Laotian, Vietnamese, other South-East Asian and Pacific Islander students)?**

- a. **CSUF** partner colleges include Golden West and Orange Coast, both of which have high Vietnamese populations. The grant program's objective is to serve Hispanic and low-income students (students do not need to be both), and we have had strong participation from non-Latinx/Hispanic students from these institutions.
- b. Presently the AIMS2 program at **CSUN** partners with four community colleges that serve a very diverse student body that includes Hispanic and low-income students. To reiterate the point from colleagues at CSUF, we can serve students who belong to any of those groups (they don't have to be in both).

**5. What worked well in your proposal and what didn't?**

- a. These will be covered in our presentations.
  - b. Ditto from CSUN :-) Stay tuned for the presentation.
- 6. Any tips for enhancing the student experience?**
- a. Engaging students early and often is important. Also, teaching students to take some responsibility about their own path and help them reach their goals are very important. Providing access to high impact practices (research, internships, leadership, study abroad, service learning) and developing critical thinking skills through projects and open-ended questions would be helpful. Of course, providing a variety of co-curricular activities on campus will enhance their experience as well.
  - b. From our collective experience across the CSU and certainly the AIMS2 program at **CSUN**, the single most important thing that we can do is to build “community” and a sense of “belonging”. A community of students, faculty, and staff - that we nurture and support. Services/activities such as mentoring, research, internships, tutoring, can all thrive and blossom when community members come together to support each other in the cohort.
- 7. What workforce development needs have been identified to receive funding?**
- a. Hispanics, low-income, first generation, and community college transfers are underrepresented in STEM disciplines. This is nationally recognized and all federal funding agencies are investing in having more diversity in STEM.
  - b. First step is to make sure that STEM is welcoming to diverse student populations and not show the door quickly to other disciplines. So, recruiting is not that hard locally- it is the retention, mentoring, graduation, and success beyond graduation are more difficult but critical.
  - c. We want to not only train students for careers, but also very important to train them to go on to professional degrees and graduate programs. We have difficulty recruiting Hispanic and other URM for faculty and leadership positions. There needs to be a bigger pool going on to higher degrees. Providing training to think beyond the undergraduate degree is important.
- 8. I would like to learn more about grant opportunities that involve a community partner. For example, I like to enhance our curriculum with field trips to a local ranch which will offer opportunities for all kinds of Natural Science and Engineering students. I would like to know if something like this already exists in the CSU system.**
- a. <https://www.csusb.edu/community-engagement>
  - b. Health science departments tend to partner well with communities better than other departments.
- 9. Please describe any successful outreach strategies to high schools or community colleges that you have used.**
- a. **CSUF** partners with 8 community colleges to provide workshops and activities related to STEM transfer preparation, research experiences, and careers in STEM, along with college-specific requests re: skill development and specialized topics. In addition to activities at partner community colleges, CSUF Project RAISE hosted each college at CSUF for workshops and lab tours. All activities were in-person prior to the pandemic and shifted to Zoom meetings during the pandemic. We’ve partnered with our campus contacts, as well as other programs and student organizations related to our population or topics to promote our activities. We intend to offer a mix of modalities moving

forward (in-person + virtual) to continue to provide maximum flexibility for students. Other tips: when utilizing social media to promote activities, tag the partners in the post for easier re-posting/sharing.

- b. **Stanislaus State** works with 10 regional community colleges to support transfer student academic preparation and articulation. We network with community college faculty and conduct brief 5-minute presentations during their courses to share information about our program activities and services. This approach has been successful since it allows us to increase awareness of the faculty and have an engaging student audience without organizing our own event. We also share our contact information during the in-class presentations to do one-on-one follow up with the students through email and virtual meetings. We also host an annual STEM Success Summit at our campus to engage the community college leadership, faculty, counselors, and other staff. Here is a link to our summit webpage: <https://www.csustan.edu/STEM-success/wow-2-stem/summit>
- c. **CSUSB** has a Transfer Student Success Center and an Articulation Director that connect with community colleges. Our college sends our STEM counselors to connect with community college students and counselors. We had a faculty learning community of community college faculty to learn from each other how best to increase transfer student success. We had a community college faculty and student workshop to discuss resources and Q&A. We also actively visit high schools for recruiting them.
- d. The AIMS2 program at **CSUN** provides a range of outreach activities like our fellow grantees. Please visit the project website at <http://www.ecs.csun.edu/aims2> to learn more. We are also embarking on an exciting project to build an Equity Innovation Hub which will be housed in an addition to the building that houses the College of Engineering and Computer Science which will have broad capacity to engage K-14 STEM students. Planning is underway for a projected completion date in 2024.

**10. There is a growing sense of urgency for Hispanics and other URMs to complete graduate programs and increase the diversity of the nation's research workforce. What factors have been had the most significant impact on our students' progress in this regard?**

- a. Undergraduate research clearly is having the biggest impact in connecting with grad programs. Connecting with UCs is another way we can increase the URMs in grad programs. CalBridge does an excellent job with astronomy, physics and computer science in providing the training to go on to grad programs. Our CIRM program at **CSUSB** also had some success in this regard.
- b. Peer Mentoring and Undergraduate research as far as AIMS2 at **CSUN** is concerned. The former is being institutionalized at CSUN based on the model from AIMS2 and the latter is in the process of being institutionalized.