

STEM Education

National Science Foundation Awards: Enhancing Your Project Through Leveraging Resources, Initiatives, and Experts

Office of University Initiatives
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#1: Leverage National Initiatives

NSF Hispanic-Serving Institution Award - \$2.5M.

Three CSUs--Fresno, Bakersfield, Stanislaus--came together to redesign for success lower-division, high failure rate Math and Chem courses through “Ideas Labs” (Knowinnovation).



Leverage National Initiatives

NSF ADVANCE Award: \$1.25M

“Kindling Inter-university Networks for Diverse (KIND) Engineering Faculty Advancement in the California State University System.” This CSU wide effort enhanced through participation in ASPIRE “IChange.”

Leverage National Initiatives

NSF Scholarships in STEM (S-STEM) Award: \$1.5M.

The Computer Science Department enhanced its “Undergraduate Scholar Education and Research (USHER)” program by including “STEM Impact Identity.” STEM Impact Identity training is delivered by ARIS: Advancing Research Impact in Society. Reference: Risien and Storksdieck, “Unveiling Impact Identity: A Path for Connecting Science and Society.”

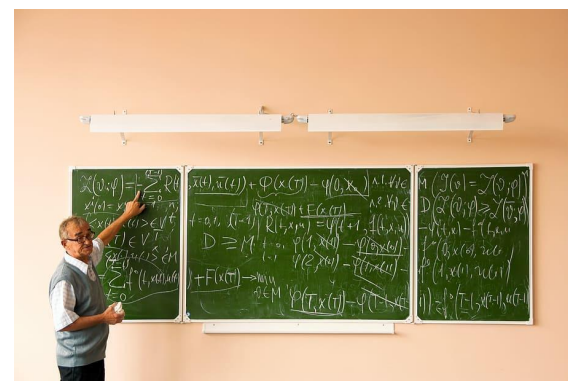
Grand Canyon Trail of Time Exhibition
(STEM Impact Identity Outcome)



Leverage National Initiatives

USDE Hispanic-Serving Institution award: \$3M. CSM, LCOE, and JCAST came together once more to implement “STEAM: Enriched Pathways.” The “STEAM” project introduces CUREs and WBLOs. See [Erin Dolan’s A Guide To Course-based Undergraduate Research](#) and USDE’s [Work-based Learning Toolkit](#).

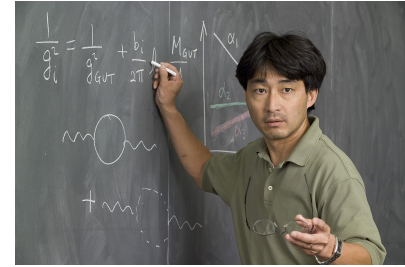
Leverage State Initiatives



NSF Robert Noyce Teacher Scholarship award: \$1.4M

The Department of Mathematics enrolled the entire graduate student cohort in the Leadership Initiative of the San Joaquin Valley Mathematics Project, a branch of the California Mathematics Project.

Leverage State Initiatives



NSF Robert Noyce Teacher Scholarship award: \$1.5M
The Department of Mathematics' award supported the 1st undergraduate student cohort entering the ITEP (Integrated Teacher Education Program). The CSU Chancellor's Office supported ITEPs to accelerate the pathway to becoming a teacher, and Fresno State was just launching ITEP.

Independent Evaluators: More Value Added

- In demand and highest credibility
- An independent evaluator can pay more attention to your award, his or her expertise can align best with your work, and his or her services cost less.
- A 'big center' evaluation often charges more for its services, provides more general expertise (such as STEM education vs. Math education), and has contracted evaluators with a bunch of awards.



How do I find an independent evaluator?

Ask for referrals from colleagues about *their* colleagues: What external evaluators have they worked with?

Professional Sources:

American Evaluation Association
Institute of Education Sciences

Engage w/ Colleagues



Our own NSF Awardees for STEM Education or STEM Professional Development who are available to discuss strategies for success:

1. Dr. Oscar Vega (Mathematics)
2. Dr. Alex Liu (Computer Science)
3. Dr. Yaomingxin Lu (Mathematics)
4. Dr. Rajee Amarasinghe (Mathematics)
5. Dr. Oka (Engineering)
6. Dr. Kimberly Stillmaker (Engineering)
7. Dr. Zoulikha Mouffak (Engineering)
8. Dr. Carol Fry-Bohlin (Education, especially STEM Education)

Reach out anytime:

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