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Eric Hsu discusses helping teachers and students succeed in STEM

March 07, 2013 -- A symposium taking place during investiture week will showcase the work of faculty from across the University who are involved in science, technology, engineering and mathematics (STEM) education. Professor of Mathematics Eric Hsu will lead one panel at the March 11 event. Below he discusses his work as director of the University's [Center for Science and Mathematics Education](#).



Professor of Mathematics Eric Hsu, who directs the University's Center for Science and Mathematics Education. Credit: Diane Fenster, Science Graphics Center, SFSU

academic skills but they leave because of bad teaching, over competition in the classroom or feeling alienated.

University science classes often require students to spend a lot of time doing repetitive calculations that don't seem related to real life. To get through these courses, students really have to persevere and have faith that there's a career gain at the end of it. Students from underrepresented backgrounds may not have the informal networks and family academic culture that other students have to help them get through tough STEM classes. They may be the first in their family to go to college or may not know anyone who has trained for a science career.

Q: What does the Center for Science and Math Education do?

A: The center has three goals: helping current and aspiring K-12 educators who teach STEM, working to give as many students as possible a chance to succeed in STEM fields, and providing opportunities for K-12 students to take part in fun activities that engage them in the sciences, for example through our annual [Sea Lion Bowl](#) competition.

Q: Why do students from underrepresented backgrounds often find it difficult to succeed in the field of science, technology, engineering and mathematics (STEM)?

A lot of students want to pursue science-based careers but many leave their studies part way through. Research has shown that many of those who leave have perfectly good

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Fortunately these are all things we can do something about through mentorship and community building. That's what we focus on in our equity and undergraduate student success programs at the Center.

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Q: You helped found the Center almost a decade ago. What are you particularly proud of in terms of the Center's impact?

About seven years ago, the number of SF State science majors who stayed on to pursue a teaching credential here was typically zero or one student per year.

We held a focus group and asked students who wanted to become teachers how we could support them. We started a program to raise the profile of teaching STEM and to help aspiring teachers to network and support one another. That was the early stages of our [Teaching Fellows program](#).

Now, the program supports a cohort of more than 70 students each year, providing them with a stipend, internships in the community, seminars with their peers, and assistance applying for scholarships.

As a math professor, I'm particularly pleased that since the program started the number of math majors who choose a concentration in teaching has increased from 25 students to more than 80.

The [Symposium: Celebration of Faculty as Teacher-Scholars in STEM Education](#) takes place Monday, March 11, noon to 2 p.m. in Room 609, SF State Downtown Campus, 835 Market Street. Advance registration by March 7 is required.

The event is part of a weeklong, campus-wide celebration taking place March 9 – 15 to celebrate the investiture of President Leslie E. Wong. For more information about events taking place during investiture week, visit:

<http://presidentialinvestiture.sfsu.edu/>

--[Elaine Bible](#)

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