

Award-Winning Program Gives Boost to Central Coast Teens Striving to be First in Family to Attend College

Hundreds Head to UCSB to Practice Math, Compete as Fledgling Engineers

Santa Barbara, Calif.-- More than 400 area teenagers are planning on coming to school Saturday, March 2. Between 8:00 and 9:00 a.m., they will converge on the University of California (UCSB) campus to take math tests and to compete building straw towers, racing cars made from mousetraps, and dropping eggs (hopefully) buffered against breaking from the top of the five-story Engineering I building.

Their efforts are aimed at college admission. If the teens make it, most will be the first generation in their families to matriculate. And the MESA (Mathematics, Engineering, Sciences Achievement) program that supports them aims not only at boosting the probability of their admission to college, but also the likelihood that they will major in math, science, or engineering.

The statewide MESA program focuses on equalizing the educational playing fields whereby students in California make their way to college and to majors in technically daunting science and engineering specialties, according to its UCSB co-directors Phyllis Brady and Robert Cota. Brady focuses on the pre-college program; and Cota, on the UCSB component.

About 150 UCSB undergraduates in engineering and science have participated in the MESA program before college. They continue that affiliation on campus. What they do, in effect, is to pull Santa Barbara-area teens towards a college education. Said Cota, "Our UCSB students who do outreach are really serving as models of what it's like to become an engineer."

The UCSB MESA students travel--many on a weekly basis--to the 11 area participating schools (six junior highs or middle schools and five high schools). There they help out with science projects for school fairs, act as tutors, and assist with the entries the teens are preparing for the contests being conducted Saturday on the UCSB campus.

The cars mounted on a mousetrap chassis and the bridges built of Popsicle sticks take weeks to make. The MESA teens tote their entries to the UCSB campus for the showdown competitions. With the cars, it's the fastest that wins. With the bridges, it's the one that can withstand the most load.

Helping to judge those contests are UCSB undergraduates who are MESA participants. And those undergraduates also help out as the teens pair up to construct air-powered vehicles or towers from straws.

These hands-on activities, Brady points out, follow strict rules, but also stimulate the creativity and experimentation that are the hallmarks of science and engineering in action.

As a gauge to how well the MESA program works, Cota points to retention rates for students who arrive at UCSB with a professed interest in majoring in engineering. That retention rate for MESA participants is 30

percent greater than the normal rate.

Two of UCSB's most illustrious alumni State Assemblyman Tony Cardenas and NASA engineer Jose Hernandez have been participants in MESA.

UCSB Chancellor Henry Yang, who serves as the MESA grant co-principal investigator for the whole State, has just received a letter, dated Feb.11, notifying him that MESA, "which supports educationally disadvantaged students from its centers at various campuses, including UC Santa Barbara, recently was named among the five most innovative public programs in the nation." Innovations in American Government (a project of the Ford Foundation, the John F. Kennedy School of Government at Harvard University, and the Council for Excellence in Government) conferred the honor. The only California winner, MESA was selected from over 1,200 programs across the United States.

Both University of California and California State campuses, as well as some private institutions, participate in the MESA program, funded primarily by the State but also with contributions from industry. UCSB is one of the Central California regional centers.

Saturday's competition is dubbed "MESA Prelims," because the winners go on to the regional finals being held this year on April 13 at CalState University Fresno.

Area secondary schools participating in MESA are as follows: (South County) LaCumbre Middle School, Santa Barbara Junior High, Dos Pueblos High, Santa Barbara High, Fillmore High, and Santa Paula High; (North County) El Camino Junior High, Fesler Junior High, McKenzie Junior High, Righetti High School, and Santa Maria High School.

Images



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