

Summer Programs. As funding permits, Fresno State MESA hosts or assists with several summer programs, including the Science and Engineering Academy (SEA) and Summer Advancement Academies (SAA). The SEA, which is a partnership between MESA, LCOE, PEGC, CalTrans, and others, focuses on hands-on projects with local thematic applications. Recent topics have included green energy, water quality, air pollution, rocketry, and astronomy. The SAA focuses on strengthening students' foundation in Algebra as they transition from middle school to high school. They are offered at local school sites and taught by local teachers. College-going activities, workshops, university field trips, and MESA hands-on projects are incorporated into the SAA.



MESA Program Outcomes

Fresno State MESA is proud to share its program outcomes and successes. Every year the program collects data on students' eligibility to attend a UC or CSU campus as well as information about students' higher education destinations and majors. In 2009 (the latest year for which all data is available), **67%** of Fresno State MESA's high school graduates met the "a-g" subject requirements for UC/CSU eligibility compared to just **34%** of all graduating seniors in California. In the same year, the



graduating Fresno State MESA students had a college-going rate of **95%** compared to just **48%** of the high school graduates in California. Of the Fresno State MESA graduates **53%** will be studying math, science, engineering, or technology majors in college. In 2009, only **32%** of high school graduates in California enrolled in these majors.

(Statistical information was derived from California Postsecondary Education Commission.)



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MESA Schools Program

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About California MESA



California MESA is nationally recognized for its ability to provide rigorous math, engineering and science academic support to educationally disadvantaged students so they excel in these fields and graduate with baccalaureate degrees in math and science-based fields. Founded in 1970, MESA serves pre-college, community college and university students throughout California. We are proud to celebrate over 40 years of MESA programming!

MESA education partners include the University of California, the California State University, California Community Colleges, independent colleges and universities, the California Department of Education, community-based education centers, school districts and individual schools.



California State University, Fresno - MESA

The MESA Schools Program at Fresno State originated in 1980 and is based in the Lyles College of Engineering. Currently it serves approximately 1000 middle and high school students in 21 schools throughout the Central San Joaquin Valley, which extends from Fresno to Los Baños, Mendota, and Firebaugh in the north and west and to Orange Cove, Dinuba, Porterville, and Delano in the east and south.



Fresno State MESA benefits from the support and commitment of the Lyles College of Engineering (LCOE), the Society of Hispanic Professional Engineers, CalTrans, the Professional Engineers in California Government (PEGC), and the California MESA Program. We have previously received support from the Motorola Foundation and the HP Foundation.

MESA Academic Model

Through MESA, students develop academic and leadership skills, increase educational performance, and gain confidence in their ability to compete professionally. MESA has particular interest in and focuses on students from those groups who historically have had the lowest levels of attainment of baccalaureate and graduate level degrees.



MESA focuses on engaging students in hands-on applications of math, engineering, science, and technology concepts through project and competition-based activities. In addition, students participate in college-going workshops and career

presentations, which include information about college admissions, financial aid, 'a-g' course requirements, PSAT and SAT prep, scholarships, and careers. MESA also provides transcript reviews and Individual Academic Plans (IAP) for students to evaluate their course preparation and their eligibility to attend a CSU or UC campus.

MESA Program Services

- Enriched math and science classes
- Extracurricular enrichment in STEM fields (science, technology, engineering, math)
- Intensive academic summer programs
- Career exploration in technology-based fields
- Field trips to colleges, universities and industry sites
- Assistance with college applications for admission and financial aid; transcript & Individual Academic Plan reviews
- Student Leadership training
- Parent Conference
- Scholarships
- Professional Development for MESA Advisors/Teachers

MESA Program Components

Saturday Academies. Throughout the year, Fresno State MESA offers MESA students the opportunity to attend four Saturday Academies.

These Academies are held at Fresno State and give students a chance to experience hands-on activities, learn about higher education and careers, and interact with college student and professional mentors. Some of last year's academy activities included robotics,



rockets, HP Engineering Design, hot air balloons, windmills, construction management, mechatronics, and more!

MESA Day Competitions. The MESA Day Competitions are the focal point of the MESA hands-on projects for both middle and high school students. Competitions range from designing a mousetrap car or windmill to creating a website to giving a speech about a current topic in science or engineering.

Students who place in the preliminary competition at Fresno State advance to a Regional-level competition. The Regional competition is held at one of four universities in the Central MESA region—Cal Poly San Luis Obispo, UC Santa Barbara, UC Santa Cruz, or Fresno State—on a rotating basis.



Field Trips. MESA provides a variety of opportunities for students to explore the STEM fields through field trips. Past destinations include the San Jose Tech Museum, the Cal Poly Open House, and the USC Robotics Competition. Field trips depend heavily on state and local school funding. In some instances, school sites raise funds to pay for transportation and other field trip related costs.

Catalina Island Marine Institute. During a three-day trip to CIMI, approximately 60 middle school students explore Catalina Island, snorkel, learn about conservation, astronomy,



and ecology, hike, and much more. Students must fundraise to help pay for this trip, so it is

generally open to 8th graders who were active in MESA the previous year.

Student Leadership. MESA Student Leadership is vital to every local MESA site program—at both the high school and middle school levels—because the leadership students act as ambassadors for the program at their respective sites. High School student leaders also serve as facilitators at MESA events at Fresno State. In this role, they not only help the events run smoothly, but also act as role models for the middle school students with whom they work.

MESA OnlineU. Fresno State MESA offers students the opportunity to access MESA programming online through the MESA OnlineU. In this online forum, students and families have the opportunity to learn about MESA projects, access college resources, and interact with other MESA students and mentors while still balancing a busy extracurricular schedule. Students who attend a school that does not have a regular MESA program can now participate in MESA through the MESA OnlineU.