



**CALIFORNIA
DEPARTMENT OF TRANSPORTATION
DISTRICT 4**

PRESENTS

**THE 4TH SUMMER
ENGINEERING
INSTITUTE**

FOR HIGH SCHOOL STUDENTS

JUNE 16 – 28, 2002

HOSTED BY

CALTRANS – DISTRICT 4

IN CONJUNCTION WITH

**SAN FRANCISCO STATE UNIVERSITY
SCHOOL OF ENGINEERING AND
COMPUTER SCIENCE
MESA PROGRAM**

WHAT IS CALTRANS?

Caltrans, the California Department of Transportation, is the State agency responsible for designing, building and maintaining California's extensive highway network, as well as various transportation projects throughout the State. Caltrans is divided into twelve (12) Districts throughout California.

Caltrans Engineers design and oversee the construction and renovation of California's highways, bridges, and other facilities that are a part of the State's growing mass transportation system.

State highways are important. While many Californians may think of Caltrans personnel to as "roadbuilders", transportation includes more than highways alone.

Caltrans engineers seek to create highly integrated systems, which incorporate highways, local roads, rail and air, as well as researching transportation systems of the 21st century. Six of the busiest airports in the nation are located in California. Caltrans is responsible for developing and maintaining a public-use airport system which is safe, capable of providing mobility within the State and accessible to the national air transportation system, and well integrated with the State's other transportation modes.

WHAT IS THE SUMMER ENGINEERING INSTITUTE PROGRAM?

The Engineering Institute is a two-week residential program for fifty (50) youths interested in engineering related careers. The institute will be held at San Francisco State University - School of Engineering from Sunday, June 16, 2002 through Friday, June 28, 2002.

During the Institute, participants will gain insight into the engineering academic program that they will encounter as college students. They will also be exposed to different engineering careers.

Certainly, there are many questions regarding a career in Engineering. What are the admissions criteria to college engineering programs? Which courses should be taken in high school? What does a college level engineering program encompass? How much do engineers make and what do they do? These and many other questions will be addressed during this Institute.

High school youths are invited to participate. All students are encouraged to enroll.

The bottom line is that the participants, who have completed the Institute, would have gained personal knowledge about their strengths and weaknesses and sufficient knowledge about the engineering profession to determine whether engineering is indeed for them.

The California Department of Transportation (Caltrans) and the San Francisco State University (SFSU) - School of Engineering, MESA Program, presents the Summer Engineering Institute 2002.

WHY CONDUCT AN INSTITUTE?

Caltrans helped develop the Institute because we care. Many of us entered engineering uninformed and ill-prepared to handle the demands of an engineering college program. The Institute is an effort by Caltrans and SFSU - School of Engineering MESA Program to assist you with your career decisions. Decisions about engineering should be based on sound, complete, and reliable information.

The California Department of Transportation is concerned that there will be a significant shortfall of engineers throughout the nation. This shortfall can only be corrected by attracting engineering students from communities that have traditionally been under-represented in the engineering professions. This is why we are reaching out to high school students through the Engineering Institute.

PROGRAM DESCRIPTION

Participants will engage in studies of mathematics, surveying, drafting, and basic fundamentals of engineering

The 50 participants will be divided into groups and each group will be responsible for completing an engineering project. All materials and instructions will be provided. Participants will present final engineering project in written and oral form to an Evaluation Committee. Awards recognizing student efforts will be presented at the end of the Institute.

Daily activities will consist of classroom instruction, group and individual study. Other activities include speakers, company tours, and recreational activities.

Participants will be given a tour of San Francisco State University's campus and will have access to educational and recreational facilities. The Institute will be staffed with Engineering Professionals who will provide guidance and assistance.

ROOM AND BOARD

During the two-week period, participants will be housed at San Francisco State University's residential apartments. Apartments will be made into male and female living quarters. Adult supervision will be provided at all times.

Transportation to and from SFSU will be the responsibility of the participant.

All meals will be provided.

WHO SHOULD APPLY?

Motivated high school students seeking a challenge and who are planning for their educational future.

Student applicant should meet the following criteria:

1. Be currently enrolled in a public high school.
2. Have sophomore or junior status in the Spring semester of 2002
3. Have completed at a minimum the first year of algebra.

WHAT IS THE COST PER STUDENT?

Only the desire to learn and challenge yourself. Students will be provided with room and board during the two-week Engineering Institute.

Notification of acceptance to the Engineering Institute will be mailed to you in writing by [June 01, 2002](#).

HOW TO APPLY:

Complete and mail the following information:

1. Application form
2. One page statement "describing your aspirations!"
3. Letter of recommendation from a high school teacher, counselor or member of the community
4. School transcripts for the last two years.

Deadline to submit applications: May 15, 2002

For further information call George Crosby at (510) 286-5866 or (510) 286-5863.

ALL CORRESPONDENCE SHOULD BE SUBMITTED TO:

Caltrans - District 4
Office of Equal Employment Opportunity
Summer Engineering Institute 2002
111 Grand Avenue
Oakland, CA 94612