USC Viterbi
STEM Educational Outreach Programs
RTH 210
Director – Darin Gray

USC Viterbi School of Engineering
STEM Educational Outreach Programs

University of Southern California

Our Mission

- STEM Educational Outreach Programs is a program within the Viterbi School of Engineering that serves educationally disadvantaged students from elementary through high school through hands-on and minds-on projects and competitions.
- Our mission is to increase the number of these students who graduate with college/university degrees in science, technology, engineering, and mathematics (STEM).
  - Our programs focus on:

-individualized academic planning

-study skills training

-peer group learning techniques

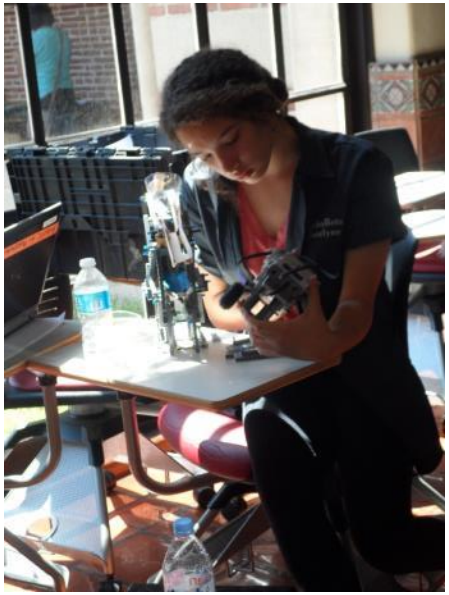
-reinforcement of National math and science standards

-career exploration

-professional development

-parent involvement

TO SEE MORE ENGINEERS TOMORROW, WE NEED TO WORK TODAY.



98%
of students enrolled in college, and

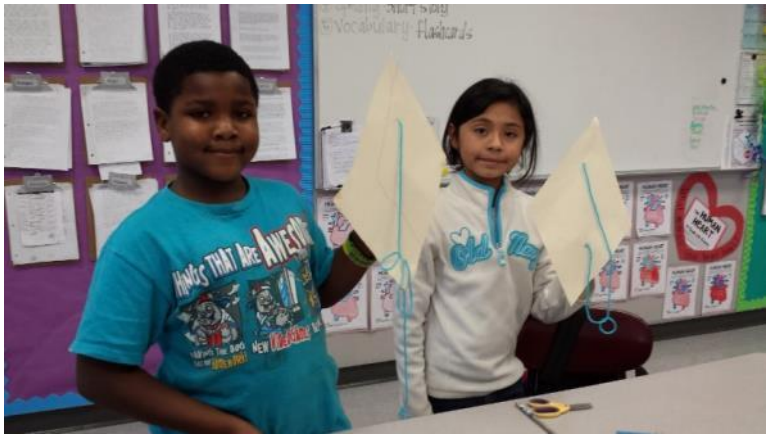
over 80%
in a 4-year university

20+
STEM Educational Outreach Programs reaches out to over 20 K-12 Schools surrounding USC

Over half
Of our students have over a 3.5 GPA

COMMUNITY OUTREACH

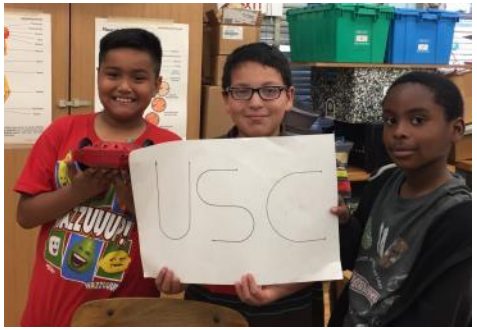
USC's STEM Educational Outreach Programs attempt to close the gap between the university and the surrounding community, by serving students from schools surrounding the area with innovative academic, college and career counseling



Mission Science

Mission science is an after-school, hands on science program where elementary school students tinker with things and ideas, and learn about science in an informal atmosphere by working on projects, experiments, and activities. Classes are lead by USC students and volunteers.

Mission Science Schools



32nd St.
Foshay
Gates
Griffin
Mack
Norwood
Vermont
Weemes

MESA

(Mathematics, Engineering, Science Achievement)

MESA is a school-based club where middle and high school students learn about science, technology, engineering and math (STEM) through activities and competitions.

MESA

Middle Schools

Bethune Middle School, Bud Carson Middle School, Edison Middle School, Environmental Charter Middle School
Foshay Learning Center, Hawthorne Middle School,
LAUSD/USC Cinematic Arts/Engineering Magnet School ,
Muir Middle School, Obama Global Preparation Academy,
Prairie Vista Middle School, South Gate Middle School and
Synergy Kinetic Academy

MESA

High Schools

- Alhambra High School
- Belmont High School
- Bravo Medical Magnet High School
- Culver City High School
- Foshay Learning Center
- Augustus Hawkins High School
- Hawthorne Math and Science Academy
- LAUSD/USC Cinematic Arts/Engineering Magnet School
- Leuzinger High School
- Palisades Charter High School
- South East High School
- South Gate High School
- Synergy Quantum Academy
- Venice High School

USC Viterbi School of Engineering
STEM Educational Outreach Programs

University of Southern California

Mission Engineering

During this two - week seminar, students work in teams on different aspects (from design to completion) of engineering projects covering various engineering disciplines.

Viterbi Summer Engineering Camp

Two week long free summer engineering camp offered to educationally or economically disadvantaged middle school students.

During the first week of camp, students explore computer science through CS@SC and learn to create video games and write apps.

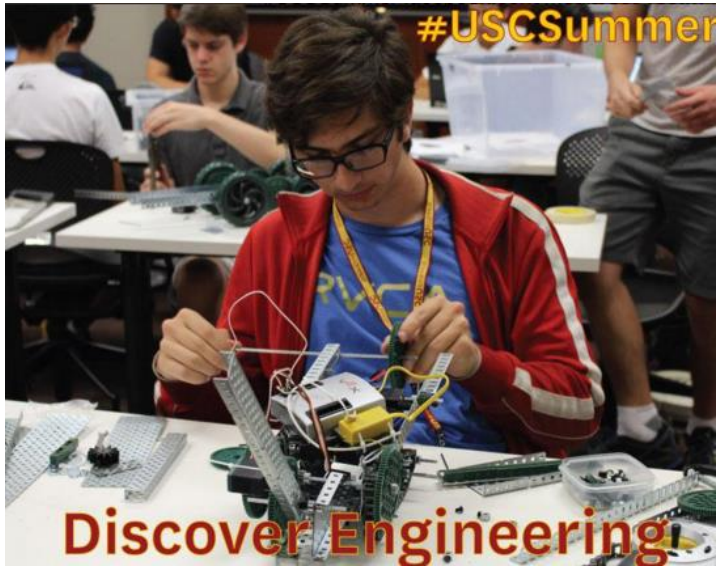
During the second week, students explore aerospace, electrical, civil and mechanical engineering with hands-on activities such as rockets, circuits, bridges and robots.

Discover Engineering

Course where students explore various disciplines of engineering through academic lectures and classroom discussions to gain practical experience.

Students practice what they learn through building and launching rockets, RC airplanes, Arduino-based projects, designing bridges, and programming robots.

Students also participate in off-campus field trips, previous trips have included the Hyperion Treatment Plant and Jet Propulsion Laboratory (JPL).



"The class was hands-on and interactive, which forced us to think critically and test out our ideas."

USC Student Engagement

- Makers of Entertaining Games Association (MEGA) – Middle School Game Making
- NSBE – NSBE Jr
- SHPE – SHPE Study Days, SHPE Day at the Museum
- SWE – Halloween Fair, SWE High School Conference
- USC Rossier School of Education – MESA Evaluation
- USC School of Social Work – Mission Science Evaluation
- Viterbi Impact – Mission Science, MESA Volunteers