

# ACES PATHWAY PROGRAM

The Architecture, Construction, Engineering Students (ACES) Pathway Program encourages high school students to explore careers in science, technology, engineering, arts, and mathematics (STEAM).

With public works investment, community college courses, and strong industry participation, ACES provides students with:

- Headstart in earning transferable college credit to the University of California and California State University.
- Access to STEAM-related internship opportunities and green careers.
- Skills to prepare for professional success.
- Opportunities to contribute to the design, construction, and operations of facilities.
- Mentorship opportunities with industry professionals.



# PROGRAM GOALS AND TESTIMONIALS



The ACES Pathway Program offers hands-on experiences to make students capable and marketable—before high school graduation. The program:

- Facilitates college enrollment and transferable college credit during high school.
- Increases the diversity of students entering design and building industries.
- Develops sustainable mentorship relationships with industry professionals.
- Gives students access to scholarship opportunities.
- Establishes a pathway to STEAM careers by creating partnerships between community colleges and local high schools.

FEEDER  
HIGH SCHOOL

COMMUNITY  
COLLEGE

INDUSTRY  
PARTNERS

STEAM  
CAREER

**“I came across civil engineering and took advantage of amazing opportunities like the summer internship.”**

Jennifer Acevez  
Graduated Alhambra HS  
Attending CSU Fullerton

**“This experience has taught me to be responsible and complete the work given to me.”**

Ruby Rodriguez  
Grade 10  
Legacy HS

**“I enjoy the opportunities presented to me inside and outside of class. I am excited to see where ACES takes me.”**

Nicholas Lukardi  
Grade 11  
Alhambra HS

**“Within ACES, I was able to explore many [STEAM] careers, have paid internships, and get college experience.”**

Milan Castaneda  
Graduated Legacy HS  
Attending Cal Poly  
Pomona

# DEMOGRAPHICS IN STEM FIELDS

Across the nation, **gender and racial gaps continue to widen** in science, technology, engineering, and mathematics (STEM) fields. U.S. News reports, “the 2015 STEM Index shows that while employment and degrees granted in STEM fields have improved since 2000, gaps between men and women and between whites and minorities in STEM remain deeply entrenched.”



Females in high school reported being less interested in STEM fields than their male peers.

**3%** of girls showed an interest in engineering, compared to **31%** of boys.



**2%** of girls showed an interest in technology, compared to **15%** of boys.

Female students scored lower on all Advanced Placement tests in STEM fields. Males outperformed females by an average of **at least 30 points** on the math section of the SATs.

In 2014, women were granted fewer degrees in STEM fields than men.



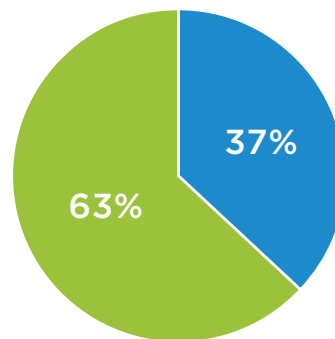
**6%** of associate degrees and **13%** of bachelor degrees granted to women were in STEM fields, compared to **20%** and **28%**, respectively for men.



# ACES DEMOGRAPHICS

The ACES Pathway Program aims to increase the diversity of students enrolling in college STEAM academic programs.

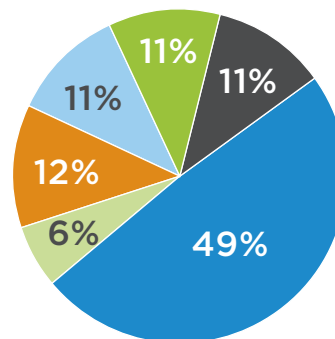
## GENDER DEMOGRAPHICS



**Male**  
282 Participants

**Female**  
166 Participants

## SCHOOL PARTNERS



**Steam High School**  
219 Participants

**Alhambra Unified**  
48 Participants

**New Open World Academy**  
54 Participants

**Bernstein Stem Academy**  
48 Participants

**Mendez High School**  
49 Participants

**Boyle Heights Technology YouthSource Center**  
30 Participants

## COURSE SCHEDULE

COURSE #	CLASS	COLLEGE	UNITS	SESSION
ES 100	Plane Surveying I	ELAC	2	Summer 2020
MIT 220	Introduction to Robotics	ELAC	3	Fall 2020
EGD TEK 221	CAD Advanced Applications 3-D	ELAC	2	Fall 2020
EET 123	Introduction to Arduino	ELAC	3	Fall 2020
EET 120	DC Circuits	ELAC	3	Fall 2020

## SEMINAR TOPICS

The ACES Pathway Program includes a seminar series and field excursions to complement college coursework and help students learn about real-world career application of STEAM academic pathways. Current topics include:

- Introduction to Architecture
- Introduction to Construction
- Introduction to Sustainability and LEED
- Introduction to Renewable Energy
- Introduction to Engineering
- Work-Readiness and Financial Literacy Workshops (Workforce Connections, Inc. and U.S. Bank)

## HOW TO APPLY

Students in grades 9-12 who attend participating high schools, are eligible to enroll in the ACES Pathway Program and can submit an application, field trip permission slip, and applicable community college enrollment application signed by a parent or legal guardian via email to **wangel@emeraldcities.org**. Applications can also be mailed to:

**Attn: Wendy Angel**  
**550 S. Hope Street, Suite 1835**  
**Los Angeles, CA 90071**

## ACADEMIC AND COMMUNITY PARTNERS

**BuildLACCD**

**YouthBuild**  
 CHARTER SCHOOL OF CALIFORNIA

**CALD YOUTHBUILD**  
 YOUTHBUILD CHARTER SCHOOL  
 BOYLE HEIGHTS | EAST LA



**ALHAMBRA**  
 UNIFIED SCHOOL DISTRICT



**HUBCITIES**  
 CONSORTIUM

