

## COURSE SCHEDULE

COURSE #	CLASS	COLLEGE/	UNITS	SESSION
GE 101	Introduction to Science, Engineering and Technology	ELAC & LACC	2	SPRING 2016
EGD TEK 101	Engineering Design	ELAC	3	SPRING 2016
ENG SUP 100	Introduction to Construction Surveying	ELAC	2	SPRING 2016
ARC 160	Computers for Designers	LATTC	3	SPRING 2016
MC3—1	Construction Fundamentals	YouthBuild	Cert.	FALL 2015
MC3—2	Construction Building Fundamentals	YouthBuild	Cert.	SPRING 2016

## SEMINAR TOPICS

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

Introduction to Architecture	Introduction to Renewable Energy
Introduction to Construction	Introduction to Engineering
Introduction to Sustainability & LEED	Work-readiness & Financial Literacy Workshops Workforce Connections, Inc. and US Bank

## HOW TO APPLY

### Who is eligible to participate?

High school students in grades 9 through 12.

### How do you enroll?

Submit enrollment application, field trip permission slip, and applicable college enrollment application signed by parent or legal guardian.

### Where do you submit an application? LACCD

Program Management Office  
ATTN: Community Economic Development Dept.  
1055 Corporate Center Drive  
Monterey Park, CA 91754

or

Via Email to:  
Mareta.Zuniga@build-laccd.org  
Wangel@emeraldcities.org

## ACADEMIC & COMMUNITY PARTNERS



**YouthBuild**  
CHARTER SCHOOL OF CALIFORNIA



**Emerald Cities**  
COLLABORATIVE



**ALHAMBRA**  
UNIFIED SCHOOL DISTRICT



**BuildLACCD**



**ACES** ARCHITECTURE  
CONSTRUCTION  
ENGINEERING  
STUDENTS

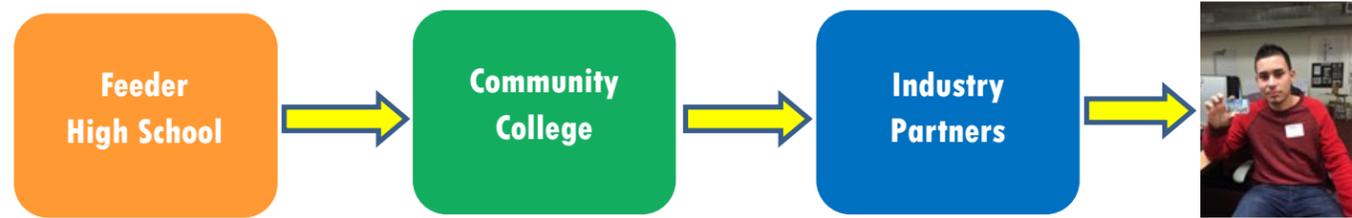


The **ACES** (Architecture, Construction, Engineering Students) **Engineering Pathway Program** exposes and engages high school students to explore careers in architecture, engineering and construction by capitalizing on the Build Program's design and construction activities, the Los Angeles Community College District's (LACCD) STEAM (Science, Technology, Engineering, Arts and Mathematics)-related course offerings, and strong industry participation. ACES also provides students:

- Access to STEAM-related internship opportunities.
- Front seat to Green Careers.
- Work readiness to increase student success in a professional work environment.
- Opportunities to contribute to the design, construction and operations of campus facilities.
- Mentorship opportunities for students.

## PROGRAM GOALS & TESTIMONIALS

- Facilitate college enrollment and college credit while in high school.
- Increase the diversity of students entering the design and building industries.
- Develop sustainable mentorship relationships between industry professionals and students.
- Access to scholarship opportunities.
- Provide hands-on experience that makes students capable and marketable prior to graduating from high school.
- Establish academic partnerships between LACCD colleges and local feeder high schools to establish pathway to STEAM careers.

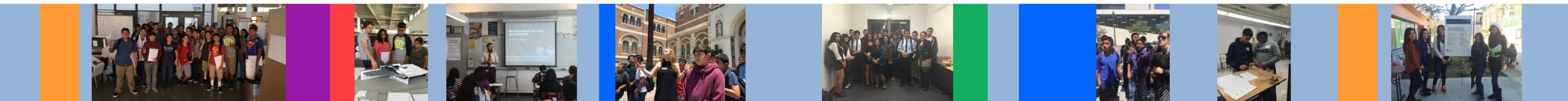


## DEMOGRAPHICS

Despite efforts to increase STEM (science, technology, engineering, and mathematics) equity in schools across the nation, gender and racial gaps continue to widen in STEM fields. According to a recent news release by US News, “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.”

### Key findings of the report include:

- Girls in high school report being less interested in STEM fields than their male peers, with only three percent (3%) reporting an interest in engineering and only two percent (2%) saying they're interested in technology, compared to 31 and 15 percent, respectively, among boys;
- Female students scored lower than their male counterparts on all Advanced Placement tests in STEM fields and males of all demographics outperformed girls by an average of at least 30 points on the math section of the SATs; and
- Six percent (6%) of associate's degrees and 13 percent of bachelor's degrees granted to women in 2014 were in STEM fields, compared to 20 and 28 percent, respectively, to male students.




**Esperanza Zuniga**  
Grade 11  
Legacy High School

*“ACES relates to my future because I would like to become an architect or engineer.”*



**Ezekial Brown**  
Grade 9  
Legacy High School

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



**Nicholas Lukardi**  
Grade 9  
Alhambra High School

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



**Carolina Bautista**  
Grade 11  
NOW Academy

*“I like that I get to enroll in a college class for free while earning an internship in the summer. This opens a lot of doors for me and my classmates.”*



**Jose Rodriguez**  
Grade 11  
Legacy High School

*“I would like to thank the ACES program for giving me this opportunity. I'm extremely grateful to be part of this program. One of the best decisions I have made and strongly recommend this program.”*



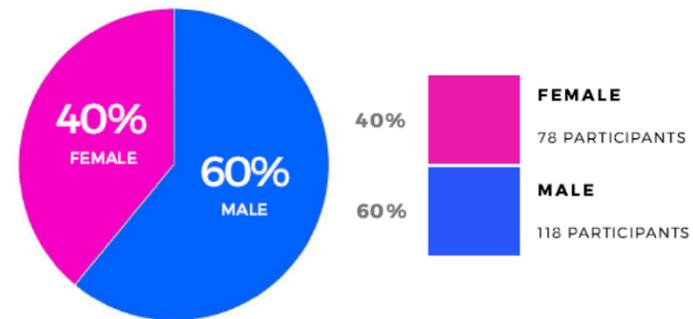
**Kevin Velez**  
Grade 12  
Five Keys Charter School

*“I'm looking forward to becoming an engineer. I look at the construction workers and think, ‘Wow, that's what we're learning.’”*

## ACES DEMOGRAPHICS—2016

The ACES Engineering Pathway program is geared to increase the diversity of students enrolling in college STEAM academic programs.

### GENDER DEMOGRAPHICS



### SCHOOL PARTNERS

