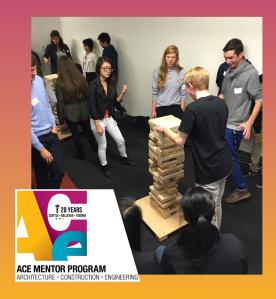




ACE MENTOR PROGRAM OF WASHINGTON

Career Directions for High School Students in Architecture, Construction and Engineering





2022 MENTOR FAQ



" ACE WAS A WAY FOR ME TO EXPLORE THE DIFFERENT DISCIPLINES AND FIND THE PLACE WHERE MY SKILLS WOULD BEST SUIT THE JOB. "

> ADAM SCOTT, ROOSEVELT HIGH SCHOOL 2020 SCHOLARSHIP RECIPIENT

WHAT IS ACE?

ACE is an after-school mentor program for high school students interested in learning about career opportunities in architecture, engineering, and construction management.

" ACE WAS THE CLUB I HAD DREAMED **OF WHEN I WAS JUST AN ELEMENTARY** the opportunity SCHOOL STUDENT FOOLING AROUND WITH SKETCH UP. "

offers students to work with professional volunteer

The program

ETHAN SCOFIELD, ROOSEVELT HIGH SCHOOL. mentors from 2015 SCHOLARSHIP RECIPIENT design firms in

Seattle, Bellevue, and Tacoma. Groups of 20-30 students meet for 7 months (paralleling the school year) to learn about all disciplines involved in the building industry. In 2022, most ACE teams will be in-person, but there is also a need for mentors for a potential virtual team.

The Washington program is one of 77 affiliates nationwide, and we just celebrated our 20th year in Washington! The local affiliate has reached 3,500+ students since inception.

OUICK FACTS

94% of ACE graduates go to college.

Of that 94%, over 65% study ACErelated majors.

80% of ACE students agree ACE taught them skills and knowledge such as green design, basic engineering principles, construction cost estimation, and computer-aided design.

In 2022, 14 ACE Seattle graduates received \$137,000 in scholarships from local firms.

THE MISSION

There are several facets to ACE's mission:

- 1. Enlighten and motivate students toward architecture. construction, engineering, and related careers.
- 2. Provide mentoring opportunities for future designers and constructors.
- 3. Increase the supply of candidates in the design and construction industry, including a specialized focus on diverse/underserved student populations and BIPOC.

THE BENEFITS

The benefits to mentoring with ACE include:

- 1. Provides an opportunity to "give back" to the community
- 2. Enhances your company's image, within the industry and also in the community
- **3.** Provides networking opportunities with other mentors
- 4. Provides community service hours to interns for licensing requirements
- 5. May provide a connection for your firm to talented and motivated students, and potential future full-time employees.

THE OPPORTUNITY

For 2022-2023, we will have in-person Seattle-, Eastside-, and SouthSound/Tacoma- based teams, as well as a virtual team with more geographic reach. Each is organized similar to a project team, with architectural, mechanical, electrical, structural and civil engineering mentors, plus a general contractor. Various other disciplines are usually added on an "as needed" basis depending on the design project selected by the team (e.g., landscape architects, geotechnical, interior design, etc.).



"ALL OF MY ACE MENTORS HAVE PUSHED ME TO BE A GOOD TEAM PLAYER, BE A BETTER CONTRIBUTING MEMBER, AND JUST BE THE BEST OF MYSCLE."

MARCEL RAMIREZ, O'DEA HIGH SCHOOL, 2020 SCHOLARSHIP RECIPIENT

WHAT HAPPENS DURING THE YEAR?

Several activities take place during ACE:

- » Mentoring sessions with students (including inoffice teaching sessions, site visits, etc.)
- » Special events for students (such as the Kickoff Event after registration and the end-of-year presentations)
- » Special events for mentors only (such as orientation and a "happy hour" thank you event)
- » Industry Leaders Reception (scholarship event)

During team meetings, students visit the offices of each design discipline and learn the roles the various fields play in project design. After the first few meetings, the students – under the direction of their mentors – develop an actual project design on paper. ACE's culminating event is Presentation Night, when the students present their designs to their families, friends, administrators, and other ACE teams.

WHAT MAKES A GOOD MENTOR?

Ideal qualities for mentors are enthusiasm and an ability to develop rapport with students.

Young mentors often can relate to the students more readily, but mentors of all ages have been successful. Also, we have found that the closer the diversity of the mentors matches that of the students, the easier it will be to form strong relationships.

There will be several opportunities for mentor training, both online and in person, which can help mentors develop positive mentoring characteristics.

WHAT SORT OF COMMITMENT IS INVOLVED?

If you and your firm can participate on an ACE team for 2022-2023, you can expect:

- Time: The main commitment a mentor makes is time. The program consists of 15 two-hour sessions from November to May. Sessions typically take place in the early evening, after work hours. In addition to attending virtual group sessions, mentors will need to spend time planning. A recent survey conducted by ACE among past Seattle mentors indicated the majority of mentors spent between 35 and 50 hours total on ACE activities during the 8 months.
- » COVID: At this time, there are no restrictive COVID requirements. Students and mentors are encouraged to be vaccinated but it is not mandatory. Hosting firms may require additional precautions separate from ACE. The student consent form, signed by the student's parent or guardian, includes a COVID waiver clause.
- » Leadership: Each ACE "team" has a designated leader or two co-leaders. If you are interested in leading a team, you will spend additional time for the purpose of being the main point person for the students and coordinating the schedule and activities of the year. Leaders are generally architects, but other disciplines have successfully lead groups in the past.
- » Meeting space and hosting sessions: ACE team meetings are hosted at firm offices, so an ideal mentoring firm can provide a conference room for up to 40 people, ancillary meeting rooms, and food. Mentoring firms can decide to serve individually wrapped foods or pizza, depending on current firm policies.
- » Optional: Some mentors/firms choose to supply incidental tools and supplies (scales, straightedges, etc.) to the students.

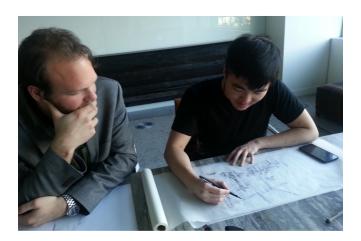


"MY ACE EXPERIENCE HAS MADE ME VERY EXCITED TO MOVE ON FROM HIGH SCHOOL AND INTO BIGGER AND BETTER THINGS. I CAN'T BEGIN TO SAY HOW GRATEFUL I AM TO HAVE PARTICIPATED IN THIS PROGRAM AND LOOK FORWARD TO GIVING BACK BY BEING AN ACE MENTOR IN THE FUTURE."

DEREK KERSEY, KENTWOOD HIGH SCHOOL 2019 SCHOLARSHIP RECIPIENT

"I THINK OF MY TEAM LEADERS AS MY OWN MYTHBUSTERS DUO FOR ARCHITECTURE. BEFORE ACE, I THOUGHT I KNEW WHAT ARCHITECTS DID ALL DAY – SIT AT THEIR DESKS AND DRAW BUILDINGS. BUT MY LEADERS SHOWED ME WHAT THEIR JOBS WERE REALLY LIKE. ARCHITECTS DO SO MUCH MORE THAN DRAWING."

TIFFANY CHANG, BELLEVUE CHRISTIAN HIGH SCHOOL 2017 SCHOLARSHIP RECIPIENT



DISCIPLINES REPRESENTED

ACE needs mentors from all corners of the A/E/C industry:

- » Architecture
- » Interior design
- » Landscape design
- » Civil/environmental engineering
- » Mechanical/ electrical engineering
- » Plumbing

- Geotechnical
- » Construction management
- » Traffic planning
- » Urban planning
- » Real estate development

WHAT OTHER WAYS CAN I GET INVOLVED WITH ACE?

If you are unable to commit to being an ACE mentor for the full year, there are other ways you or your firm can get involved:

- » Lead a Field Trip: Provide access to a construction site or another interesting destination. Field trips are always in high demand and the students enjoy them tremendously. Transportation, if needed, can be arranged by the chapter.
- » Give a Seminar: If you have special knowledge of a subject, perhaps you would consider putting on a one-time seminar for an ACE team. Examples of topics that might be of interest are sustainability, steel erection, building information modeling, integrated project design, and more.
- » Provide an Assembly Space: A few events, particularly those that involve multiple teams, require a large space, such a large cafeteria, an auditorium, or other assembly space.
- » Spread the Word: Talk to your firm, colleagues, friends, or professional organizations about ACE.
- » Assist in Student Recruitment: This involves visiting schools in the area and giving talks about what you do and the ACE program. We also have a special sub-committee committed to recruiting underserved populations/minorities/BIPOC.
- » Assist in Mentor Recruitment or Program Planning: Getting ACE off the ground each year is a big task. We can always use help in this area.
- » Contribute to our Scholarship Fund: Seattle ACE students have received more than \$1,121,000 in scholarships since 2001, with all of those funds coming from local A/E/C firms.







FIND US ON LINKEDIN LINKEDIN.COM/COMPANY/SEATTLEACE



WHAT FIRMS HAVE MENTORED FOR ACE IN THE PAST?

These firms served as mentors for the 2021-2022 school year:

AHBL

Alexandria Real Estate Equities

BLRB Architects
BRR Architecture
Coffman Engineers
CollinsWoerman

Cornerstone General Contractors

Coughlin Porter Lundeen

Dark Light Design
DCI Engineers

Degenkolb Engineers

DLR Group

DPR Construction

Dykeman Architects

EBD Services Exxel Pacific

Ferguson Architecture Freiheit Architecture

Gensler GGLO

GLY Construction

GMD Development Hargis Engineers

HNTB

Howard S. Wright | Balfour Beatty Hutteball + Oremus Architecture

Integrus Architecture

Jacobson Consulting Engineers

KPFF Consulting Engineers Lease Crutcher Lewis

LMN Architects

Magnusson Klemencic Associates

McGranahan Architects Miller Hull Partnership

Mithun Mortenson

MZA Architecture NAC Architecture

NBBJ

OAC Services, Inc.
Olson Kundig Architects

P2S Inc

PCS Structural Solutions

Prime Electric Ross & Baruzzini Sazan Group, Inc. Schultz Miller

Sellen Construction Seneca Group

Skanska

SMR Architects

Stantec

Swenson Say Faget Thornton Tomasetti

Trane

Turner Construction Company

Valley Electric VECA Electric

Venture General Contracting

Weinstein A|U Wood Harbinger ZGF Architects

HOW CAN I JOIN ACE AS A MENTOR?

The ACE season parallels the school calendar, so mentors are recruited in the late summer/early fall in preparation for starting the groups in October. When possible, individuals are encouraged to visit and

observe groups in progress during the year to get a better idea of how the program works and to be prepared for the next year. Please contact us if you are interested in becoming a mentor!

CONTACT INFO

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FACT SHEET

- ACE'S 74 AFFILIATES OPERATE IN 36 STATES, THE DISTRICT OF COLUMBIA, AND PUERTO RICO.
- IN 2018, THE NATIONAL AND LOCAL ACE PROGRAMS RECEIVED \$5.2 MILLION IN CASH DONATIONS.
- THE 15-SESSION AFTERSCHOOL PROGRAM IS OFFERED WITHOUT CHARGE.

THE ACE MENTOR PROGRAM OF AMERICA
(ACE) WAS CREATED IN 1994 BY THE
INTEGRATED DESIGN AND CONSTRUCTION
INDUSTRY TO MEET ITS FUTURE
WORKFORCE NEEDS.

74 AFFILIATES

TODAY, THIS INDUSTRY'S LEADERS
GUIDE, SPONSOR, AND RUN
ACE AT THE NATIONAL
AND LOCAL LEVELS.

MENTORS



- 4,100 VOLUNTEER PROFESSIONALS FROM ALL INDUSTRY SECTORS ARE ACE'S BACKBONE.
- THEY SERVE AS MENTORS AND BOARD MEMBERS.
- THE ANNUAL VALUE OF THEIR IN-KIND SERVICES TOTALS \$17.5 MILLION.

4.1K MENTORS

STUDENTS



- IN THE 2018-2019 SCHOOL YEAR, THE PROGRAM ENGAGED OVER 10,000 STUDENTS FROM 1,100 HIGH SCHOOLS. 2/3 COME FROM MINORITY AND UNDERSERVED COMMUNITIES.

10K STUDENTS

SCHOLARSHIPS



- SINCE ITS START, ACE HAS AWARDED ALMOST \$18 MILLION IN SCHOLARSHIPS TO STUDENTS INTENDING TO STUDY INDUSTRY-RELATED FIELDS IN COLLEGE OR ENTER A SKILLED CRAFT TRAINING PROGRAM.
- IN 2018, 750 STUDENTS RECEIVED \$2 MILLION IN SCHOLARSHIPS.

\$18 M

ACHIEVEMENTS



ACE AND MANY OF ITS AFFILIATES HAVE EARNED NUMEROUS AWARDS FROM NATIONAL AND LOCAL ORGANIZATIONS. MOST NOTABLE ARE:

- 2010 PRESIDENTIAL AWARD FOR EXCELLENCE IN SCIENCE, MATHEMATICS AND ENGINEERING MENTORING (THE NATION'S HIGHEST AWARD FOR MENTORING).
- 2014 INSTITUTE HONORS FOR COLLABORATIVE ACHIEVEMENT BESTOWED BY THE AMERICAN INSTITUTE OF ARCHITECTS.



Minorities and individuals from underserved populations are significantly underrepresented in the design and construction industry workforce. **ACE helps address this problem.**

ACE students are more diverse and come from more challenging backgrounds than high school students across the country.

Compared to college freshmen nationwide planning architecture and engineering majors, ACE attracts far greater percentages of women and minorities.

ACE STUDENTS ARE CONSIDERABLY MORE DIVERSE THAN PUBLIC SCHOOL STUDENTS NATIONWIDE.

68.9% VS. 47.5% NATIONWIDE ²







FIRST GENERATION STUDENTS

2019 ACE SENIORS

26%

2018 SENIORS NATIONWIDE

14 4%

Proportionately, more ACE seniors are first generation college students (26%)³ than their national counterparts (14.4%)⁴.

ELIGIBILITY FOR FREE + REDUCED LUNCH

43.4% YES

37.9%

18.6%

A substantial portion of ACE students in 2018-19 (43%)¹ qualified for the Federal free and reduced lunch program. (No comparable national data exists.)

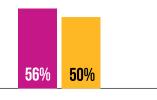
In terms of gender and race, ACE college freshmen planning majors in architecture and engineering are **more diverse** than their counterparts nationwide, in some cases by almost double.



WOMEN COLLEGE FRESHMEN

(%) Planning Architecture & Engineering Majors

■ ACE 2019³ vs. ■ Nationwide 2018⁴



ARCHITECTURE ENGINEERING



AFRICAN AMERICAN + HISPANIC COLLEGE FRESHMEN

(%) Planning Architecture & Engineering Majors

■ ACE 2019³ vs. Nationwide 2018⁴



DATA SOURCES

- 1. ACE Database of Registered Students
- 2. U.S. Department of Education, National Center for Education Statistics, Digest of Education Statistics, 2017, Table 203.50.

31%

18%

- 3. ACE 2019 Survey of Students (n= 2,609, margin of error +/- 1.8%).
- 4. Higher Education Research Institute, UCLA, 2018 CIRP Freshman Survey. This survey is based on responses from 126,056 first-time, full-time students beginning their studies at 202 four-year colleges and universities of varying selectivity and type in the U.S. The data was statistically weighted to reflect all first-time, full-time baccalaureate students in the U.S. In 2017 approximately 1.5 million freshmen enrolled in 1,482 postsecondary institutions.



01



ACE IS ONE OF A KIND

No other program introduces high school students to the full process of designing and building a project and to the entire spectrum of design and construction industry careers.

ACE SERVES THE ENTIRE A-E-C INDUSTRY

All A-E-C industry sectors sponsor and lead ACE for the benefit of the overall industry's workforce.



02

03



ACE HELPS MEET FUTURE WORKFORCE NEEDS

70% recent alumni major in A-E-C in college or are already employed in the industry.

ACE INCREASES DIVERSITY OF INDUSTRY WORKFORCE

The percentages of African-American and Hispanic ACE students entering college as architecture and engineering majors and of female engineer majors is double the national rates.



04

05



ACE TAPS THE POWER AND VALUE OF VOLUNTEERS

Almost 4,100 industry professionals annually volunteer as mentors and contribute in-kind assistance worth an estimated \$17.5 million.

ACE SUCCESSES EARN NATIONAL RECOGNITION

ACE has won the nation's highest honor for mentoring (Presidential Award for Excellence in Science, Mathematics and Engineering Mentoring) as well as American Institute of Architects awards.



06

07



ACE GIVES STUDENTS A BOOST IN COLLEGE

ACE has awarded more than \$18 million in scholarships since its start, including \$2 million last year. 84% recent alumni confirm ACE gave them an edge over their freshmen college classmates.

ACE TEACHES INDUSTRY-RELATED SKILLS

80+% of ACE students agree they learned green design, basic engineering principles, construction cost estimation, computer-aided design, and other industry-related knowledge.



08

09



ACE STRENGTHENS 21ST-CENTURY WORK LIFE SKILLS

95% recent alumni agree ACE improved their leadership, oral and graphic communication, problem-solving, and teamwork skills.

ACE ENHANCES HIGH SCHOOL STUDIES

80% students say ACE made their high school studies more meaningful and motivated them to study more.



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