



ACE Mentor Program: Pathway to Community Colleges and the Skilled Trades

Webinar - January 26, 2017, 11am-12pm PST

Presentation agenda

- **Welcome**
Reneè Tomlinson – HVAC Excellence
- **Introduction and Overview of BEST Center**
Larry Chang – BEST Center Manager, ACE Oakland Mentor, Architect
- **ACE Mentor Program Overview**
Diana Eidenshink – Interim Executive Director
Andrew Frankel – Regional Director (West)
- **Kirkwood Community College & ACE Eastern Iowa**
Joe Greathouse – Professor of Construction Management
- **Cuyahoga Community College & ACE Cleveland**
Kenneth Hale – Executive Director, Early College and Outreach Program
& ACE Cleveland Secretary
- **Laney College & ACE Oakland**
Lorena Arroyo – ACE Oakland Team Leader
Tom Scott – ACE SF Bay Area Board Member & Regional Leader
- **Q&A** - please type your questions

BEST Center - National Science Foundation National Center for Building Technician Education

Laney College, Oakland, CA; www.bestctr.org

Mission: To prepare technicians to manage building systems and energy use by

- Spurring a national forum on the role of building technicians in energy efficiency
- Advocating for advanced technical education & high- performance building operations
- Facilitating the dissemination and adoption of exceptional curricula and technical programs in sustainable building performance

Goals

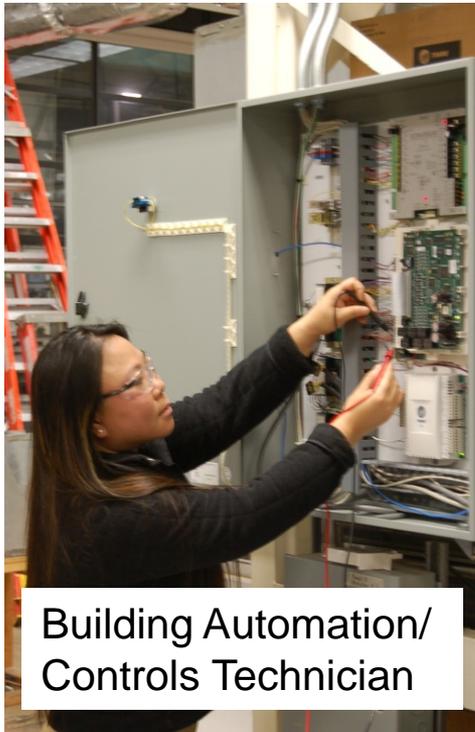
- Build and transform community colleges in the field of building systems technician education, e.g. Heating, Ventilation & Air Conditioning, Building Automation Systems.
- Engage industry stakeholders in a national collaboration with community colleges.
- Strengthen the national STEM pipeline for educating building technicians and engineers to include high school STEM education and career awareness

What are some occupations for building technicians?

BEST Center Career Videos:

Building a Better Tomorrow Now (2.5 min) - https://www.youtube.com/watch?v=zLXPWb45_IY

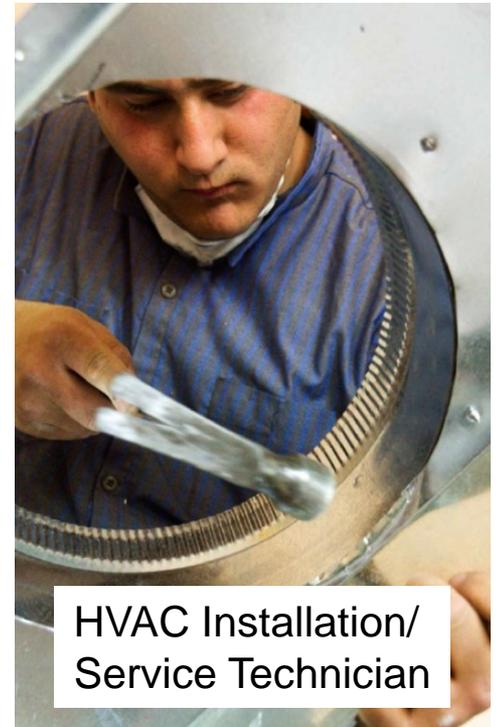
Building a Better Tomorrow (7 min) - <https://www.youtube.com/watch?v=Ohti1aHHK7g&t=5s>



Building Automation/
Controls Technician



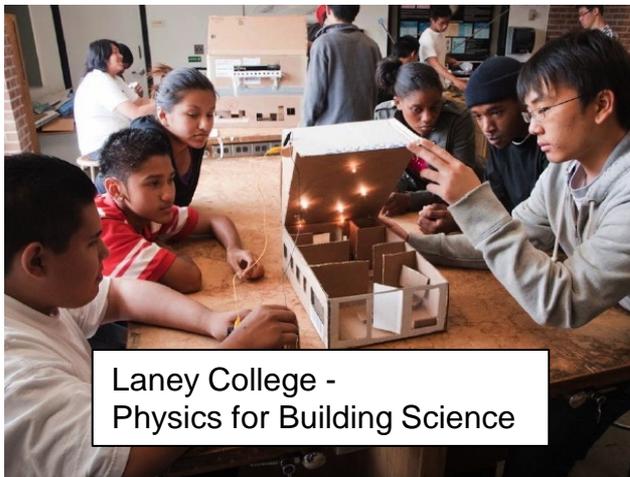
Building/Stationary
Engineer



HVAC Installation/
Service Technician

Why do we need to reach high school students?

- Present building technicians are near retirement age plus there are insufficient new recruits – we need urgently to build the workforce of tomorrow!
- Building operations provide excellent, middle-skills jobs which pay living wages or better without requiring a bachelor's degree.
- Many building technician jobs are local and can't be off-shored.
- Demand for operations and maintenance is steady, even when new construction isn't.
- Plan for future generations--high performance buildings can save energy now and \$\$ in the long run and are good for the environment and human health.



ACE Mentor Program - National



ACE MENTOR PROGRAM
ARCHITECTURE • CONSTRUCTION • ENGINEERING

Diana Eidenshink
Interim Executive Director

Andrew Frankel
Regional Director - West

ACE Mentor Program - National



- Brief History and Overview of ACE
- Expanding “C” (construction) opportunities for students is a major focus of program
- Partnering with CC’s great way to achieve goal

ACE Mentor Program - National

- CCs help connect ACE students to affordable “pipeline” to industry
- Campus resources: tools, talent, info
- Deeper connection to community/other orgs
- Get program support:
 - Mentors
 - Guest Speakers
 - Board Members
 - Curriculum/project development
 - CC students can be involved

ACE MENTOR 2014-2015 DESIGN/BUILD PROJECT – STEM CENTER

Eastern Iowa Affiliate Year in Review

Joe Greathouse – Professor of Construction Management



Kirkwood Community College

Fall 2014 Kickoff!
1st Year of ACE Mentor in Eastern Iowa



154 Students
46 Mentors

The design process for a 1600 sq ft STEM Center for a local middle school.



Fall semester – met as a large group four times for four hours each.

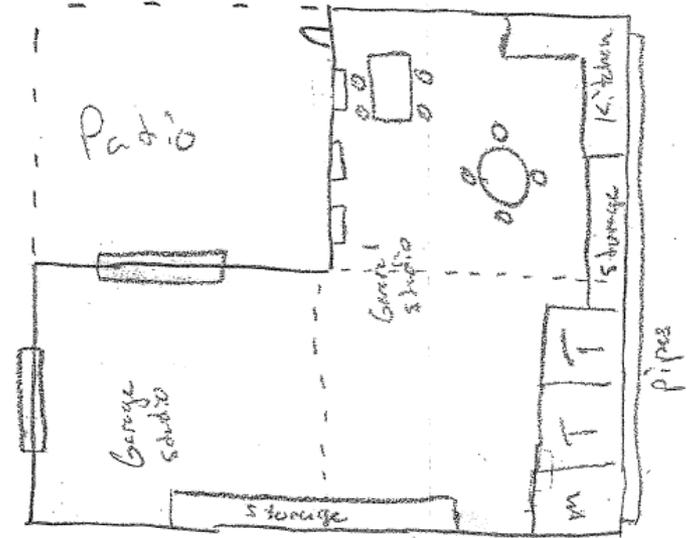
Sketches from fall meetings....

Branding opportunity
Clipper Logo
or
ICA STEM CENTER



"Clipper Blue"
ACM Panels

Glass
Garage Door



Sketches turned into models



Spring Semester:

- Design work finished
- Estimate complete
- Schedule built
- Home Builders Association insurance policy in place

Summer Semester:

- Kirkwood course (Construction Projects CON-237)
- Students spend 100 hours on the job site through various stages of construction
- Completed build August 19th, concluded with community open house

Construction begins.... Groundbreaking Ceremony.



Construction process...



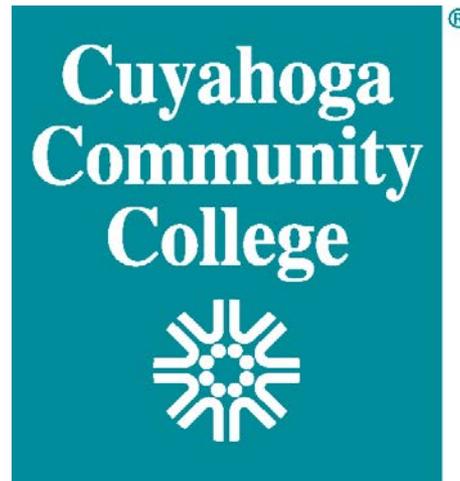
Finished project!



See additional pictures and progress at: <https://www.facebook.com/ccastemcenter/?fref=ts>

Multi-layered Institutional Involvement with ACE Mentor Program

**Kenneth Hale, Director,
Access and Community Engagement,
Cuyahoga Community College (Tri-C),
Cleveland, Ohio**



Tri-C ACE Mentor Program

Webinar Presentation Overview

- ACE Mission
- Board of Director involvement and structure
- Advisory Council involvement
- Matching scholarships
- Articulation agreements resulting college credit
- Hosting ACE school program on campus

ACE Mentor Program of Cleveland



ACE Mission

Engage, excite and enlighten high school students to pursue careers in the integrated construction industry through mentoring.

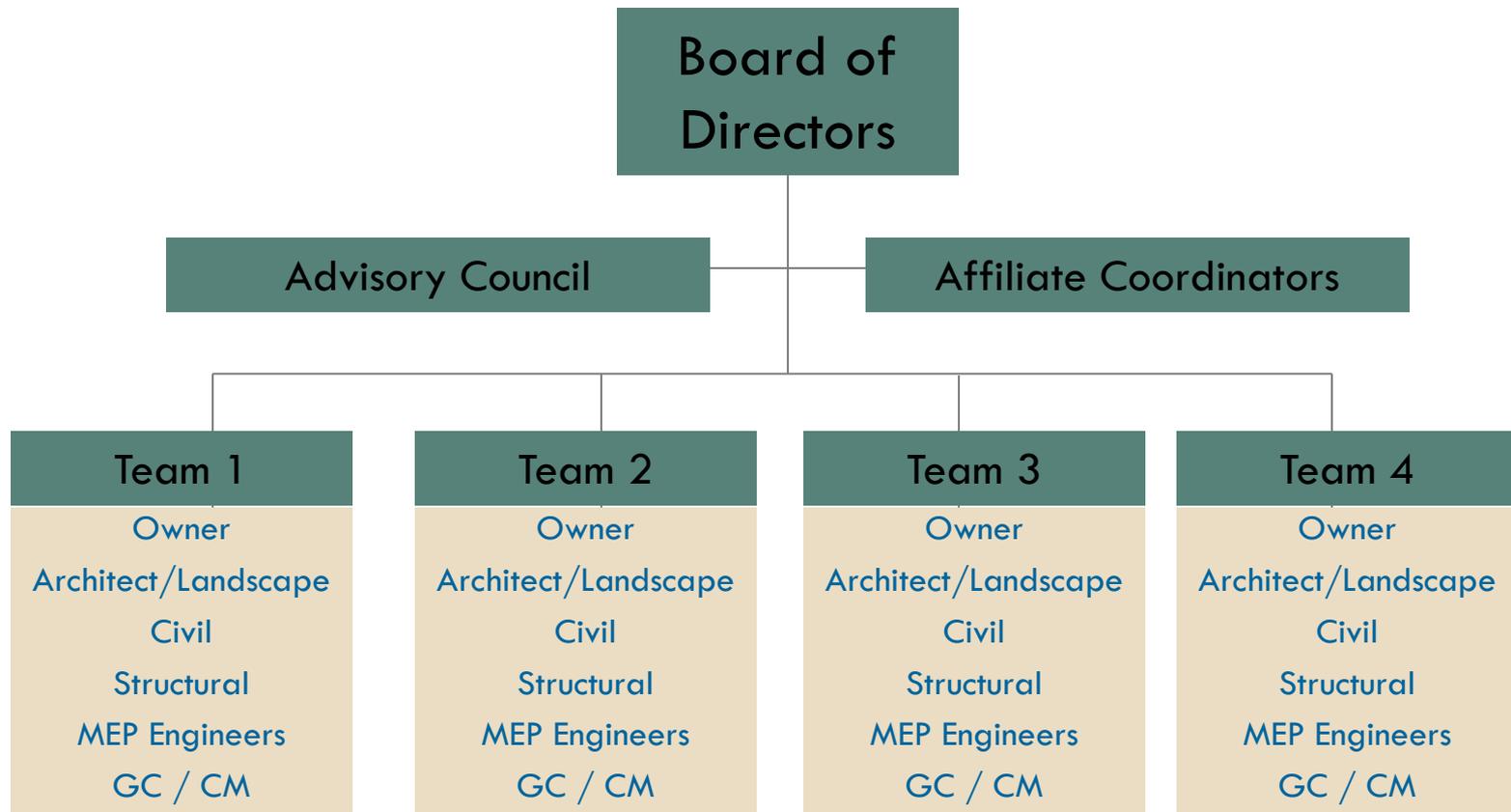
Support their continued advancement in the industry through scholarships, grants and College Mentoring.



ACE Mentor Program of Cleveland



How ACE Works



ACE Cleveland Teams & Lead Firms



John Hay Juniors

Lead Firm:
ThenDesign
Architecture

John Hay Seniors

Lead Firm:
Gilbane Building
Company

James Rhodes

Lead Firm:
Turner Construction
Company

New Tech East

Lead Firm:
CIVITAD Services

Collinwood

Lead Firm:
NEORSD / Dominion

Max Hayes

Lead Firm:
Ozanne Construction
Company

New Tech West

Lead Firm:
Regency Construction
Services, Inc.

ACE Mentor Program of Cleveland



ACE Advisory Council

- AIA – American Institute of Architects
- ASCE – American Society of Civil Engineers
- BOMA – Building Owners and Managers Association
- CEA/AGC - Construction Employer's Assoc./Associated General Contractors
- Cuyahoga Community College
- City of Cleveland
- CES – Cleveland Engineering Society
- Cleveland Hopkins International Airport
- Cleveland Public Power
- Cleveland State University
- Construction Employers Association
- CREW – Commercial Real Estate Women
- Kent State University College of Architecture and Environmental Design
- Kent State University Urban Design College
- NAIOP – National Association of Industrial and Office Properties
- NAWIC – National Association of Women in Construction
- NEORSO – Northeast Ohio Regional Sewer District
- NOSHE – Northern Ohio Society for Healthcare Engineering
- SMPS – Society for Marketing Professional Services
- VIP Restoration
- Wire-Net



Supporting Organizations

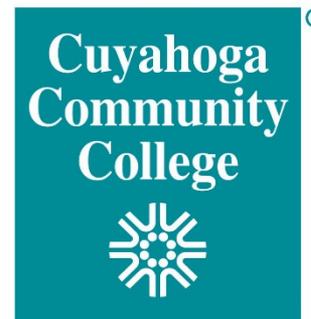
- AECOM
- AKA Construction Management
- The Albert M. Higley Co.
- Arcadis
- ARC
- The Austin Company
- Barber Hoffman
- Behnke Landscape Architecture
- Bostwick Design Partnership
- Bialosky & Partners
- CEC Consulting
- Chas E. Phipps Company
- CMHA
- CIVITAD Services
- The Cleveland Clinic
- Cleveland Metropolitan Schools
- Cleveland State University
- Coleman Spohn
- College Now Greater Cleveland
- Cuyahoga Community College
- CT Consultants
- Dominion
- Forest City Enterprises
- Fredrick, Fredrick & Heller
- G. Stephens
- Gardiner Trane
- Geis Companies
- Gilbane Building Company
- Greater Cleveland RTA
- HLMS Sustainability Solutions
- Infinity Construction
- The John F. Gallagher Co.
- Karpinski Engineering
- KBJ, Inc.
- Kent State University
- The Krill Company
- Langan Eng. & Environ. Services
- Marous Brothers
- Michael Benza & Associates
- The Mobile Professor
- Moody Nolan
- MWH Global
- NV5
- Neff & Associates
- NEORS
- North Coast Concrete
- NuSurge
- Osborne Engineering
- Oswald Companies
- Ozanne Construction Co.
- Palmer Conservation Consulting
- Panzica Construction Co.
- Precision Environmental
- Project and Construction Services
- PSI
- Regency Construction Services, Inc.
- Richard L. Bowen
- RP Madison
- SE Blueprint
- Skanska
- Shook
- Stantec
- ThenDesign Architecture, Ltd.
- Thompson Hine
- Thorson Baker & Associates
- Tremco
- Turner Construction Company
- Trumbull - Great Lakes - Ruhlin JV
- The University of Akron
- University Hospitals
- Van Auken Akins Architects, Ltd.
- VIP Restoration
- Vocon
- Walsh Construction
- Whiting-Turner

Scholarship Awards

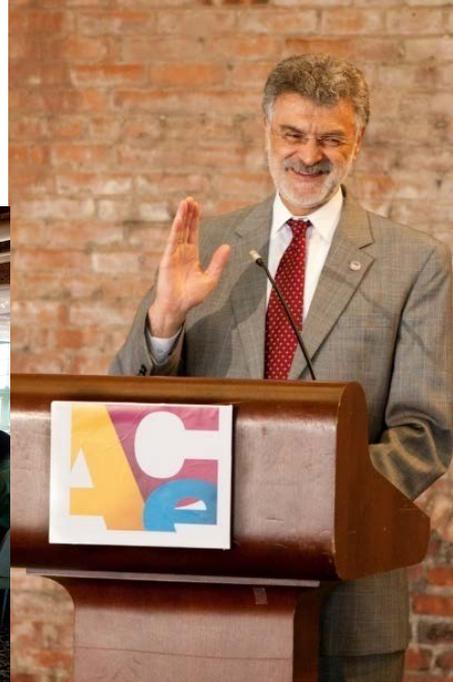
Scholarship Partners



University Hospitals



Final Presentation Night





Scholarship Awards

Final Presentation Night & Scholarship Awards Banquet



ACE Mentor Program of Cleveland

2014 Final Presentation Night
&
Scholarship Award Banquet

Tuesday, May 6, 2014 | 5:30 p.m.

Windows on the River

2000 Sycamore Street
Cleveland, Ohio

ACE STUDENT PRESENTATIONS

Final Design Projects

Keynote Speaker

David E. Gilbert

President & CEO, Greater Cleveland
Sports Commission and Positively Cleveland

Sponsorship Opportunities Available

See online registration

SCHOLARSHIP AWARD CEREMONY

Graduating ACE Seniors



ACE Cleveland has awarded more than \$327,500
in scholarships since 2009!

ADVANCE REGISTRATION ONLY

By April 25, 2014

<http://www.gilbaneco.com/events/ace-cleveland>

Please Register by April 25, 2014

Information on sponsorship levels, registration, and payment instructions available at the link above.

Articulation Agreement /

Articulation Criteria – Essential Elements

- Graduation from high school
- Successfully complete two years of the ACE Mentor Program of Cleveland
- Submission of the Tri-C's admission application
- Admission to the College no later than 12 months after completion from ACE Mentor Program and registers for the Construction Engineering Technology Program.

- Benefit: Students who meet the Articulation Criteria will receive course credits, tuition-free, for the following College courses towards the College's Associate of Applied Science in Construction Engineering Technology:
 - 1) Construction Engineering Orientation (3 credit hours)
 - 2) Construction Elective course (3 credit hours)

Tri-C's High Tech Academy's ACE Mentor Program site is led by AECOM



Tri-C's High Tech Academy's ACE Mentor Program "pilot" class, April 2016



ACE Mentor Program of Cleveland

How to Get Involved



*Serve on a **mentor team** for the upcoming school year*

*Serve as a **guest speaker** to multiple teams*

*Provide a **space** to host a meeting, office tour, construction tour*

*Donate **money** for scholarships*

*Provide **co-op** opportunity during holiday break in December 2015 or Summer break 2016*

*Assist with **committee work***

- Event planning: Scholarship Dinner (May), Golf Outing (August)*
- Communications / PR Committee (ongoing)*
- Education committee (ongoing)*

*Serve as a **mock interview volunteer***

*Serve as a “**College Now Mentor**” to scholarship winners during their college years*

ACE Mentor Program Oakland, CA



LANEY
COLLEGE

Tom Scott and Lorena Arroyo

ACE Mentor Program Board of Directors and Co-coordinator
ACE Oakland Team, Laney College



ACE Oakland and Laney College Partnership



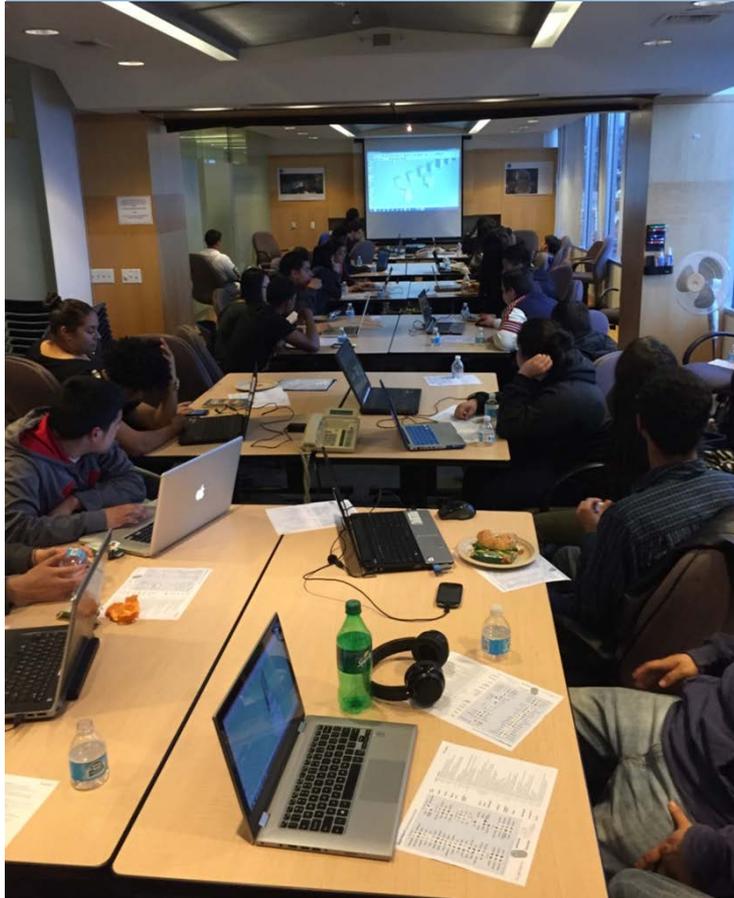
LANEY
COLLEGE

- Students receive hands-on instruction from Laney professors and local construction industry guest speakers and mentors.
- Being at Laney this year will provide on-campus resources and give students the opportunity to have a college campus experience.
- Students learn career paths in the trades that involve higher education and vocational training through the community college system; some
- ACE Oakland team will design Tiny Houses to address local housing crisis in partnership with Laney College.

ACE Oakland in Action



LANEY
COLLEGE



Left to right: SketchUp lesson at BART headquarters; Cypress Mandela visit, Oakland; San Francisco Affiliate event, SF

Q&A/ Contact Us



ACE Mentor Program of America

www.acementor.org

571-297-6869



HVAC Excellence- ESCO Group

www.escogroup.org/hvac/

800-726-9696



BEST Center

www.bestctr.org

Larry Chang, manager

510-464-3240

