ACE Mentor Program Delaware

April 2011

What is ACE?

ACE is a unique partnership among industry professionals – architects, interior designers, landscape architects, mechanical, structural, electrical, environmental and civil engineers, construction managers, college and university representatives, and other professionals from related corporations and professional organizations – who work together to attract young people to their professions.

Industry professionals volunteer to become mentors to high school students in order to introduce them to the professions and encourage them to pursue studies and careers in these fields. In return, the industry gets a much-needed boost of new talent. Go to acementor.org for more info.

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Mentors

- Katrina Della Pelle, ABHA Architects
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- Melissa Boulden, MacIntosh Engineering
- Meredith Mitchell, MacIntosh Engineering
- Ted Thomson, Jr., Pennoni Associates Inc.
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- Geoffrey Anderson, Rodney Robinson Landscape Architects
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- Jason Hartman, Skanska USA Building
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- Matthew Pirolli, Skanska USA Building
- Joseph Adelmann, University of Delaware
- Rick Stratton, Vandermark & Lynch

Students

- Abigal Glover
- Adrian Lopez
- Attilio Cafini
- Beth Gutierrez
- Christian Tabares
- Dan Zebley
- Dwayne Riley
- Eddie Mueller
- Hector Rangel
- Isaiah Stanley
- Jacob Baker
- Jesse Reaume
- Jesus Saravia
- Jesus Zamudio
- Joshua Marks
- Jovani Gonzalez
- Kevin Zheng
- Mario Morales
- Scott Grimes
- Steve McLaughlin
- Tyler Nichols
- Will Cochran

Session Number Five

On December 15, the group took a field trip to the University of Delaware to tour the ongoing construction of the University's new Interdisciplinary Science and Engineering Building (ISEB) and East Campus Utility Plant (ECUP) facilities. The visit was kicked-off with a welcome by Dr. Michael Chajes, Dean of the College of Engineering and a discussion about the ongoing sitework by Kris Satterfield of Whiting Turner, the construction manager. Joe Jakubowski, P.E., a geotechnical engineer with Duffield Associates, provided an overview of the micropile foundation installation taking place at the ISEB site. After donning hard hats, vests and safety glasses, the group participated in a tour, providing an opportunity for first hand observation of an active construction project.

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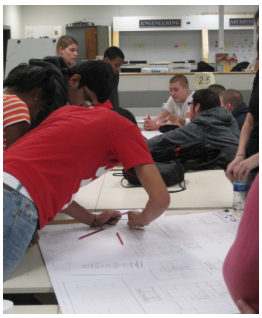
Session Number Six



On January 5, the mentoring group from MacIntosh Engineering gave a presentation on the role of the structural engineer in the design/construction process. Melissa Boulden Meredith Mitchell and Robert MacIntosh explained the various considerations that go into the design of a new building, including the various loads that are applied to the building frame, the many material options and the variety of structural systems that are evaluated during the planning for a new building project.

Examples of structure in nature were presented, including spider webs, honeycombs and anthills. Prominent historic buildings were highlighted including the Leaning Tower of Pisa, the Pyramids at Gaza and the Colosseum in Rome. These well-known edifices are great examples of the timelessness and durability of great structural engineering.

Modern day structures such as the Petronas Towers, the Sydney Opera House and the Burj Al Arab Hotel in Dubai, were presented to show the wide range of structural accomplishments that are possible with today's materials and sophisticated design software.

Finally, the MacIntosh Engineering team brought the focus back to our local community, highlighting some of their design projects in the region, including the Christina Crescent Building, the Peterson Wildlife Refuge and the WSFS Headquarters at 500 Delaware Avenue.

Session Number Seven

Chuck Campagne, Vice President of Quality H&A Inc., started out the afternoon session with a brief overview of his background and how he got into the Mechanical Trades. He discussed his training, education and the progression of his career throughout the years and his passion for his work. Chuck then put on a demonstration of the Navis software currently being used for 3D coordination at the Wilmington Hospital Expansion project in Wilmington, Delaware. The demonstration consisted of a compilation of the different trades and the drawings they use to coordinate the installation of the mechanical systems such as the fire protection, plumbing, domestic water piping, electrical conduits and the sheet metal duct systems. All of these items were brought into a model of the building and a series of clash detections were done to look for interferences of the trades.

Session Number Eight

Session postponed.

Session Number Nine

On February 16, the ACE mentoring group took a tour of the Hockessin Athletic Club, located in Hockessin, DE (www.hachealthclub.com). The students were able to view a modern athletics/fitness facility, complete with

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childcare, pre-school and dining services. The tour, given by a member of the facility's original management staff, gave the ACE students insight into how the intended function of the building translates into a finished product. The students will hopefully be able to draw on this experience when designing their own fitness facility for final presentations.

Adrian Lopez

I signed up for the ACE program because my teacher Mr. B. suggested it to help improve my skills. I would like to learn a little more about how the different branches of the drafting field work together in organizing this type of project that we are working on. Currently, I have not narrowed down an exact career I would like to pursue but am certain in following in some sort of drafting field. I hope that in working with the underclassmen, we can all learn from each other.

Abigail Glover

I signed up for ACE to learn about all the careers that I could someday do after graduating from high school. During this program, I would like to learn about interior design or staging houses or something like that. I do not really have a clue as to what I want to do specifically, but I know I want to do something in the tech drafting field. I really like architecture and designing so maybe a career in interior design or architecture will be great.

Christian Tabares

I signed up for the ACE program because I wanted to get a better idea of all the engineering fields there are to offer. What I would like to learn about this program is how important every engineer's job is to design one project. The career that I would like to pursue the most would be in the architectural field. I am pushing more towards this career because this is an area that I am most interested in and I like the jobs that architects are hired to do.

Mario Morales

I signed up for the ACE program to get more hands-on experience and to be able to learn from professionals that can teach me a lot. During the program, I would like to know what it would take to become a successful civil engineer, from the skills you need to the education it requires. Civil engineering is what interests me the most because of the simple fact that I want to design bridges. I want to thank all the ACE members for taking the time to help us and teach us how to be successful in the engineering world.

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Schedule of Meetings

Meeting	Date	Location	Topic	Activity	Project Action	Presenter
1	10/20/2010	Delcastle Tech HS	Kick-off	Owner's Perspective	ACE / Project RFP	Skanska
2	11/3/2010	Delcastle Tech HS	Architecture	Programming	Identify Program / Develop Bubble Diagrams	ABHA
3	11/17/2010	Delcastle Tech HS	Civil Engineering	Site Planning / Logistics	Identify Site Conditions/ Utilities	V&L
4	12/1/2010	Delcastle Tech HS	Environemental Engineering / Landscape Architecture	Environmental / Landscaping	Environmental Review / Landscaping	Pennoni / Rodney Robinson
5	12/15/2010	UD Site Tour	Geotech Piles	Tour UD Site	Geotech Piles	Duffield
6	1/5/2011	Delcastle Tech HS	Structural Engineering	Structural Design	Structure Concept	MacIntosh
7	1/19/2011	Delcastle Tech HS	MEP Overview	MEP Design	Develop MEP Systems	Quality / Battaglia
8	2/2/2011	Pike Creek / CCHS Wilmington	Construction Management	Site Tour	Evaluate Construction Logistics	Skanska
9	2/16/2011	Delcastle Tech HS	Construction Management	Scheduling and Costs	WBS and Milestone Sched. / Cost Estimate	Skanska
10	3/2/2011	Delcastle Tech HS	Project design and deliverables	Project Working Session	Work on Project / Develop Presentation	Project Working Session
11	3/16/2011	Delcastle Tech HS	Project design and deliverables	Project Working Session	Work on Project / Develop Presentation	Project Working Session
12	3/30/2011	Shop Field Trip	TBD	TBD	Pending Trip Location	Project Working Session
13	4/13/2011	Delcastle Tech HS	Project design and deliverables	Project Working Session	Develop Presentations	Project Working Session
14	4/27/2011	Delcastle Tech HS	Practice Presen-tations	Project Working Session	Practice Presentations	Project Working Session
15	5/11/2011	Delcastle Tech HS	Final Presentations			