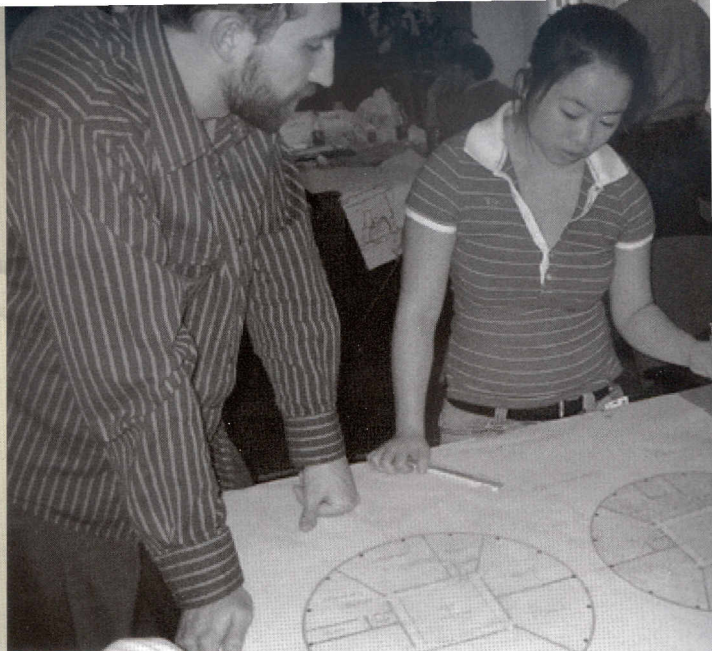


# ACE in the Hole

Images courtesy of Ch



Student Annie Chin (right) reviews a floor plan with architect and mentor Matt Snoap, AIA.

## Mentor program deals students a helpful hand

By Lara Brown

**On a windy evening in late autumn, 25 high school juniors and seniors and 13 mentors gather around tables on the third floor cafeteria of South Shore High School on Chicago's South Side.**

The students and their mentors are divided into four groups. The table overseen by engineer Nate Sosin of Thornton Tomasetti and cost estimator Fred Arnold from George Solitt Construction is strewn with licorice twists, marshmallows and gummy worms.

"So if I am twisting this," Sosin says as he pulls a gummy worm at opposite ends and encourages the students to do the same, "what kind of force is being enacted on it?" The children intently stretch and release the gummy worm, watching how it reacts.

"Tension?" one student guesses, correctly.

The students continue the hands-on smashing and contorting of treats, relating the action to forces.

A second group of students sketches apples and bananas in section and in plan. A third group embarks on a 10-minute scavenger hunt with digital cameras in tow to document architectural components like brick walls, fire doors, and south-facing windows. Laughter and the sound of books dropping onto the table come from the fourth group, challenged by their mentors to construct a column or other form out of an 8 1/2-by-11-inch piece of paper that will support a stack of books.

"That is awesome!" remarks Crystal Jordan, a senior, who watches as the paper column she created supports four heavy textbooks.

The students and mentors are called ACE Team 1 and are a part of the Chicago ACE Mentor program. The organization gives high school students an introduction to careers in architecture, construction and engineering. Now in its 10th year in Chicago, ACE is an affiliate of a national program, founded in 1994, that grew from a small program in New York City. ACE affiliates now exist in 80 cities throughout the United States. ACE is supported by a network of volunteers and corporate sponsors—including some from outside the obvious realm of architecture, engineering and construction firms. Among others, the General Services Administration, Fifth Third Bank, the Chicago Building Congress, and Chicago Public Schools are on board as sponsors.

In both public and private schools, the program matches mentors—architects, engineers, construction project managers, and now owner's reps and project managers—with high school students in their junior and senior years. During the current school year, the Chicago affiliate will mentor 203 students from 35 different schools, comprising seven teams. Ninety-two percent of



this year's participating students are minorities, and 30 percent of the students are female. This academic year, 180 professionals from Chicago-area firms will donate their time as mentors. Seven Chicago architecture firms participate, with two firms tying for having the largest number of volunteers—17 each—hailing from OWP/P Cannon Design and Perkins+Will.

Students meet with their mentors for two hours a week from November through March, learning the basics of engineering, architecture, and project management. Around the fifth week of the program, students decide on a project and pick their roles on the team. The student groups are meant to act as a real design team, with members filling roles as architect, engineer, or project manager. The teams' work culminates with the presentation of their final projects at an awards ceremony in March. Due to the students' and mentors' intense commitment to the program, the students finish the ACE program with more than a cursory understanding of their projects.

Jeff Reinke, AIA, a principal at OWP/P Cannon Design, has served for three years as the ACE National Affiliate Council Representative of the Midwest and also on the Chicago ACE Board of Directors for 10 years. Reinke recalls watching the student presentations with Joseph Dolinar, AIA, partner at Goettsch Partners and a Chicago ACE Board member, "The students are up there and talking about the skin structure and block structure of a building. Joe [Dolinar] and I were watching, and we looked at each other, and I said, 'We're gonna be working for these kids.'"

Team projects in the past have ranged from a 16-story student dormitory on the campus of UIC, a 100,000-square-foot, LEED-certified children's museum in North Grant Park, to an eco-conscious museum with landscaping in Starved Rock State Park. The students' presentations reflect their understanding of programming, budgeting, engineering and construction site logistics.

The experience of Nikki Dennis, a civil engineer and project manager at the Rise Group, a Chicago- and Alaska-based owner's rep company, demonstrates that ACE offers exposure and opportunity. Dennis participated in the ACE program while a senior at Morgan Park High School in 2004-2005. She received an internship at the Rise Group after graduating high school, went on to study engineering at IIT, and now works as an assistant project manager at the Rise Group for the Public Building Commission of Chicago. She also volunteers as a mentor for ACE Team #1.

"It really did give me exposure. People [at engineering firms]

knew who I was—they were like, 'Oh, you're Nikki.'" Dennis graduated in May 2009 and—when it came time to interview—this type of recognition was an advantage she didn't mind having.

Penny Varnava, LEED AP, managing architect at Chicago Public Schools, is now in her third year of volunteering in the ACE program. She likes the exposure that ACE provides and talks about the importance of introducing children to careers that they might not learn about otherwise. "One student said, 'I think it would be pretty cool to be a cost estimator,'" Varnava says. She says she appreciates that ACE helped that student discover a potential career that might otherwise have been unknown.

Wendzell Davis, a senior, says he likes the program because he enjoys being creative. When participating in the scavenger hunt, he is the first student to volunteer to take pictures with the camera. Another senior, Maurice Brooks, who quickly guessed the forces

at work in the engineering exercise, says he wants to use computers to "be a part of a team that creates something out of nothing."

As of spring 2009, the Chicago ACE Mentor Program has awarded more than \$300,000 in college scholarships and 20 paid internships. Its members have mentored more than 750 students.

ACE continues to reach out for new sponsors and to review and tweak programming. In an effort to retain students in the program, the organization is trying something new with ACE Team 1. In previous years, students met at the office of

participating firms downtown. This year, ACE Team #1 will spend half of its time at South Shore High School and then transition to DeStefano Partners' office for the remaining half of the year.

Dennis hopes that more students will follow in her footsteps. She is currently the only former ACE mentor student who has returned to the program as a mentor.

"I hope to encourage the students to pursue careers in this industry and [encourage a] desire to give back as I am trying to do as a mentor. I believe the program helped me to get where I am today....and I hope these students take advantage of the opportunities available to them," Dennis says.

*The Chicago ACE fifth anniversary luncheon will be February 18, 2010, at the Palmer House Hilton. Students will give their final presentations and receive their internship and scholarship awards in March. Anyone interested in becoming a sponsor should contact Pat O'Connell, executive director of ACE Chicago, at 847.328.7818 or poc99@comcast.net. Learn more by visiting [www.acementor.org/chicago](http://www.acementor.org/chicago). CA*



Students Jesus Ibarra (clockwise from lower left), Laurel Chavez, Edilberto Gutierrez, Jeffrey Pawalko, and Lucy Valdez construct a clay model with mentor Lauren DiPalma (right foreground), a structural engineer at Thornton Tomasetti.





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**"WHEN ACE STUDENTS HAVE THE CHANCE TO SPEAK ABOUT THEIR EXPERIENCES WITH THE PROGRAM DURING THIS LUNCHEON, YOU KNOW YOU ARE IN THE PRESENCE OF AN ORGANIZATION DOING AMAZING, INSPIRING WORK."**

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ACE Mentor Program students from ACE Tech Charter, Curie Metro, Homewood Flossmoor and Lane Tech College Prep High Schools participate in a building exercise.

**THURSDAY, FEBRUARY 18, 2010  
 PALMER HOUSE HILTON, 17 EAST MONROE  
 RECEPTION STARTS AT 11:00 A.M.  
 FOLLOWED BY LUNCH AND PROGRAM AT 12:00 P.M.**

### ABOUT THE CHICAGO ACE MENTOR PROGRAM

The Chicago ACE (Architecture, Construction and Engineering) Mentor Program is a unique partnership among industry professionals. ACE works to increase the awareness of high school students to career opportunities through structured mentoring relationships and the awarding of college scholarships. This year, we are working with over 200 Chicago Public School students (a 25% increase over 2008), of whom 92% are minority and 30% are female.

### ABOUT THE FIFTH ANNUAL CHICAGO ACE MENTOR PROGRAM LUNCHEON

The Annual Luncheon is not only an important fundraising event but an opportunity to share our mission of education and mentoring with you. It's a who's who of the best and brightest in the Chicagoland construction, engineering, and architecture community! Last year's Luncheon attracted over 500 guests from the corporate, civic, and education communities.

2010 Luncheon honorees include:

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Exelon, accepted by Frank Clark, Chairman and Chief Executive Officer

#### CIVIC HONOREE

Erin Lavin Cabonargi, Public Building Commission (a former ACE Mentor!)

For more information about the ACE Mentor Program Luncheon or to purchase tickets, please visit [www.acementor.org/chicago](http://www.acementor.org/chicago) or call Hoopla Communications at 773.486.6920.

Individual tickets are \$200 each. The ACE Mentor Program Luncheon also offers Sponsorship Opportunities with unique benefits beginning at \$2,000 for a table of eight.