TheReport
E
ngineering is at its core a community service, or ‘putting knowledge to work for society,’ as The Fu Foundation School of Engineering and Applied Science web site says. So it’s no surprise that the School’s introductory class, Gateway Course: Design Fundamentals—Using Advanced Computer Technologies, enunciates students in the real-world intricacies of urban engineering.

“Engineering is the application of science for the benefit of humanity,” said Zvi Galil, dean of the School of Engineering. “Creating a course that uses community service learning in a natural extension of the ‘can-do’ philosophy of engineering to bring real-world experience to students at all educational levels.”

This summer, through collaboration among the School’s Center of Continuing Education, 40 lucky high school students were able to take advantage of this hands-on learning experience. Taking the Gateway Course, the student body gained the eager young minds to study on the college-level as well as make a difference in the community.

The course is orchestrated by lead instructor Jack McCourt, associate dean for undergraduate studies. “Through our Community Service Learning Program, students become involved in the community right away in their first year,” McCourt said. While it immerses the student in the engineering design process, the course also develops a lifelong orientation toward social responsibility and community service.

During an intensive summer schedule, high school students were presented with an opportunity. Harlem’s landmark Marcus Garvey Park, located south of 26th Street along the axis of 5th Avenue, wanted to revamp one of its playgrounds, and the students would develop different design solutions. Locating students to the park, to PS 79, a school geared toward children with disabilities, the planned playground would address the special recreational needs of PS 79’s students.

The Gateway Course practices a holistic design model for teaching its students, using as many resources and educational tools as possible for the students to be able to design a complete approach to their designs. Individuals representing the many necessary perspectives for the designs talked to the class throughout the course.

Albert Davis, Engineering ’92, computer resource coordinator for Marcus Garvey Park, physical and occupational therapists from PS 79 and a Harlem neighborhood advocate, gave students a unique perspective on the challenges and possibilities of such a project. GLOT Doctoral Fellows from the Engineering School spoke to students on a broad range of subjects, such as civil, biomedical, mechanical, mechanical and earth and environmental engineering.

Students split into eight teams, each designing a piece of playground equipment for a specific disability, such as being impaired, visual impairment, physical or learning disability. As well as copious amounts of research, field trips to the park and other educational locations, such as the Playground for All Children in Queens and Museum of Modern Art, provided inspiration and guidance from practical and aesthetic standpoints.

Students drew initial plans, received feedback from the community partners and then created sophisticated 3D computer models with the resources of the Botwinick Gateway Laboratory. Through a final Power Point presentation, students displayed their entire creative process from inception to 3D rendering for the rest of the class.

The designs have since been submitted to the NYC Department of Parks and Recreation with enthusiastic responses. As explains Manhattan Commissioner William Castro asked that the report be sent to him and said he would pass on the models to the designer as well as engineers.

This fall students will work on the phase of the project—taking select designs and providing more detailed analysis and models.

The goal, according to McCourt, is to build prototypes this spring.

Going forward, the Gateway Course will continue its successful relationships with other community partners, such as Playing2Win, Morningside Health and Recreation Services and Harlem Live.

For more information, go to http://communityfu.us/columbia.edu

President Bollinger Welcomes Class of 08 (continued from page 1)

the better part of freedom. He urged the new students not to waste the precious years of being able to focus almost exclusively on learning and developing the mind.

But then he leaned his message with humor, joking that Columbia has all the makings of a pretty good resort: decent accommodations, reasonable food, fitness centers, and centers and support services with people of the same age in one of the great cities in the world. All of this, Bollinger noted, at a price tag of around $158 a day—about the same as the Holiday Inn (in New York City). And that’s not even to mention an abundance of courses on fascinating subjects and one of the greatest libraries in the world.

On a more serious note, however, Bollinger suggested using the Columbia experience to be open to different understandings of the world. “Some will tell you college is a time to figure out what you believe, to find your identity, to choose what you believe. I think it would be a mistake to approach this time period in that fashion. Having your own viewpoint is at some level fine and good—but when you cross that psychologically significant threshold from wondering about the world to ‘this is what I believe,’ you inevitably close yourself off to meaningful and exhilarating encounters.”

Bollinger also suggested that incoming students view this time as a framework for life: “There is still so much to learn,” he said. “The United States and the world have never been more in need of inquiring and intelligent minds—never more in need of people like you.”

Clockwise from top: Bollinger, Quigley and Galil.

MANHATTANVILLE

ECONOMIC BENEFITS OF CU’S GROWTH IN WEST HARLEM

An architectural rendering of the proposed Manhattanville project.

Editor’s Note: For the past year and half, Columbia has been involved in the planning process that proposes expansion into the Manhattanville section of West Harlem. University officials and faculty have met with city planners and community leaders in an effort to develop a plan that is beneficial to Columbia and its neighbors. Because this issue is of paramount importance, The Record will provide news and updates in each issue on the progress of the project.

In a recent keynote address before members of the Greater Harlem Chamber of Commerce during Harlem Week, Robert Kasdin, senior executive vice president of Columbia, discussed the proposed project, including the potential economic benefits to the City of New York and West Harlem, continuing an already strong economic relationship.

“New York City as a whole, and Harlem in particular, has flourished with the efforts and partnerships that everyone in this room has helped to build,” Kasdin said. “I take pride in working for a University that collaborates with the city and with our community on many fronts: healthcare, education, the environment, business development and more.”

Among the many economic benefits of the campus expansion, Kasdin noted that the project will create a total of approximately 12,000 jobs.

• Some 8,700 new jobs—administrators, lab technicians, security officers, and maintenance personnel—alongside researchers and faculty—would be created.
• New retail, restaurants, community services, and other business employment would add another 900 jobs in spaces included in the plan.
• University spending on goods and services for the Manhattanville operation, together with spending by employees in their home neighborhoods, would support another 3,000 jobs throughout the city.
• These would be permanent jobs to be generated over the next several decades—in addition to construction-related employment and the $5.7 billion economic stimulus associated with building the new campus.

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