

American PhDs Get Green Building Program in Brazil

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The world's rapidly increasing population is straining natural resources, necessitating a sustainable approach to development. Starting this fall, University of Pittsburgh students will be able to travel to the University at Campinas (Unicamp) in São Paulo, Brazil.

There they will conduct research in green construction and sustainable water use technology under a new Pitt program funded by a US\$ 3.2 million Integrative Graduate Education and Research Traineeship (IGERT) grant from the National Science Foundation (NSF).

The program, spearheaded by the Mascaro Sustainability Initiative (MSI) in Pitt's School of Engineering and a joint effort of the school and the Center for Latin American Studies within Pitt's University Center for International Studies, will allow engineering doctoral students to journey to São Paulo for eight-month international research rotations at Unicamp, one of the top engineering schools in South America.

"Sustainability is a global issue, and an appropriate technology for the U.S. may not be appropriate for another region," noted principal investigator Eric Beckman, who is Bayer Professor of Chemical Engineering at Pitt and codirector of the MSI.

"At Unicamp, students will gain an international perspective on technology and design, with an eye to learning about novel approaches to sustainability developed by our Brazilian colleagues."

"We believe that by learning to adapt to the Brazilian culture and to study, research, and live in Brazil for an extended period, the IGERT fellows will then have the confidence and ability to adjust to other cultures throughout the world," Beckman added.

"This will make the graduating fellows highly desirable to government, nongovernmental organizations, and industry."

In an effort to increase the number of Hispanic students in the field of engineering, the program also includes partnerships with the University of Texas at El Paso and the University of Puerto Rico at Mayagüez.

Students from those institutions will be able to complete the Master of Science degree at their home institutions, transitioning into the IGERT program during their final semester and pursuing the Ph.D. degree at Pitt.

The program, which is the first IGERT grant led by Pitt, involves faculty from all seven engineering departments at the University.

Coprincipal investigators are associate professors of industrial engineering Kim LaScola Needy and Mary Besterfield-Sacre; Robert Ries, assistant professor of civil engineering and director of Pitt's Green Construction Program; and Laura Schaefer, assistant professor of mechanical engineering.

The curriculum emphasizes team-based design that crosses departmental lines. Unlike most graduate engineering programs, it will include a capstone sustainable design course, so that engineers from different specialties can learn a common framework for sustainable design.

Created in 2003 through the generous sponsorship of John C. Mascaro (CEE '66, '80) of Mascaro Construction Co. LP, the Heinz Endowments, the Dominion Foundation, and the estate of George M. Bevier (PetE '13), the MSI supports research and educational programs that focus on greening the built environment and the sustainable use of water.

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