

Rensselaer Extends Its REACH

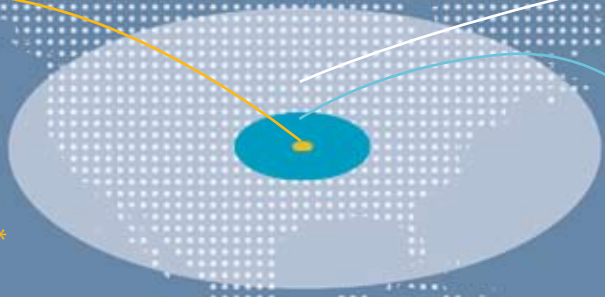
An ambitious new program builds on the success of its

Despite the fact that 96 percent of humanity lives outside the borders of the United States, only 19 percent of Americans have passports, and only about 2 percent of U.S. college students study abroad each year. Given the global nature of multinational corporations and the natural diffusion of science and technology worldwide, this presents a major challenge—especially for American engineering education.



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* Source: *Open Doors 2007: Report on International Educational Exchange*, Institute of International Education (IIE)

cross-cultural predecessor

Lester Gerhardt and several colleagues monitored the problem for years; in 1995, they set about to resolve it. The result was the Global Engineering Education Exchange (Global E³), the brainchild of an interdisciplinary team that included Gerhardt, deans at other universities, Gertrud Humily, then at the French Ministry of Defense and Peggy Blumenthal, Executive Vice President of the Institute of International Education (IIE). Today, the remarkable success of Global E³ has paved the way for the new Rensselaer Engineering Education Across Cultural Horizons (REACH), a program that Gerhardt will develop and lead.



Lester Gerhardt, Professor and Director of International Programs for the School of Engineering

Outstanding Students Go Abroad

The structure of Global E³ was simple. True to the program's title, engineering students (including those in computer science) could apply to spend one or two semesters abroad. Either option could include an internship as well. American students would immerse themselves in a foreign culture, and international students could study at partner campuses in the United States.

"The program was designed to be student-focused, voluntary, small, and flexible," said Gerhardt, who has been serving as Rensselaer's vice provost and dean of graduate education, in addition to his positions as associate dean of engi-

neering, professor of electrical, computer, and systems engineering, and professor of computer science. "An overall agreement for the program was established, negating the need for individual memoranda of understanding." The program administration was centralized at the IIE.

This simple formula struck a chord. Starting with a handful of schools, Global E³ now includes almost 100 universities in 15 countries worldwide—36 in the United States, with others mostly in Europe or Asia. About 200-250 students take advantage of the program in any given year. Most students come to the United States from Asia, while American



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Rensselaer is taking a bold step towards improving this current picture.

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students largely seek study in European countries. One important group has been particularly attracted to Global E³: over 40 percent of participants are women, a remarkable fact since women typically make up about 20 percent of engineering students, nationwide.

Taking the Quantum Leap

The enthusiasm of the participants—and the rising importance of cross-border, culturally sensitive teams in global companies—demonstrated the need for a giant step forward. Together Gerhardt, Dean of Engineering Alan Cramb, President Shirley Ann Jackson, and Rensselaer's Board of Trustees took that step: to require all engineering undergraduates to incorporate an international experience in their educational program. The initiative, Rensselaer Engineering Education Across Cultural Horizons, soon became known by its acronym, REACH, and Gerhardt was named director of international programs to lead the project.

Under REACH, 25 percent of Rensselaer's junior class in engineering will study abroad at specific partner universities in 2009; in return, an equal number of undergraduates from the partner universities as a whole will come to Rensselaer. Every two years, the Rensselaer percentage will rise another 25 percent, and the partner universities' share will increase accordingly, until all engineering juniors spend a year abroad. Ultimately, the program is designed to grow well beyond engineering to encompass a wide range of disciplines and departments.

Such a quantum leap in program size, of course, demands a more formal structure

and strong logistical management. "With such large numbers of students, we must be careful to arrange for a balance of disciplines in the students we send abroad, with a matching of that balance in the students we accept from our international academic partners," Gerhardt explained.

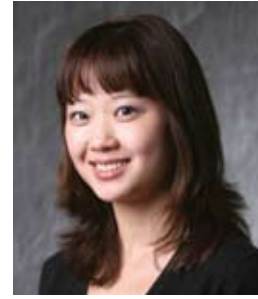
REACH sets rigorous parameters for partner universities. "They must be top-ranked in their field—at least of the same caliber as Rensselaer," Gerhardt recounted. "They must offer a breadth of engineering disciplines and teach in English. It's also important that they have a large existing base of international students, so that visiting students can get as broad a cross-cultural experience as possible. And of course, these universities must be in a culture that is both stimulating and safe for students."

Ideally Positioned for Success

It comes as no surprise that Rensselaer, the first technology university in the English-speaking world, is also the first American university to launch a mandatory program like REACH. The in-depth experience with Global E³ universities, and the extensive network that Gerhardt has developed with them, provide Rensselaer with the knowledge and relationships to make the program successful. Although REACH will initially focus on a semester-abroad experience, it is expected to include other options, such as Semester at Sea, Engineers Without Borders, and the Peace Corps.

"Respect, trust, and confidence in others are the keys to both Global E³ and REACH," Gerhardt said. "They form the best foundation for building bridges to reach across the world's oceans."

A Bridge to China—and the Global Experience



If your latest initiative requires students to immerse themselves in other cultures, it helps to have staff who have done the same.

In that respect, it is hard to imagine a better example than Alexandra Li. With her fluency in three languages (English, Mandarin, Shanghaiese) and her roots in China, the new senior program administrator for Rensselaer's REACH initiative has connected several of New York's highest-profile leaders to her home country.

As special assistant to University at Albany President Kermit Hall for China programs, she not only served as leading interpreter and cultural adviser, but also designed the university's China study-abroad program. For the attorney general of New York State, she was bilingual coordinator for all media relations and prepared official statements for the state's Chinese media.

Her connections on the other side of the Pacific are no less impressive. Already during her brief career, Li has built a network of contacts in the Chinese divisions of multinational companies, such as Intel and Unilever.

Having grown up in Shanghai, she came to the United States for graduate school, modeling the cross-border experience that Rensselaer students will soon encounter. "I came to see what kind of lifestyle people follow on the other side of the globe," she recalled. "The initial cultural shock was inevitable, but I found that the best way to deal with it was by immersing myself in that culture. For example, there is no 'superiority' attached to either eating rice or burgers; they are simply two different foods favored by two different cultures. An open mind to differences, together with a respectful attitude towards another culture, can help you thrive almost anywhere."

To her newest challenge, Li brings not only her global perspective, but also a master's degree in communication and a vast store of energy. "For a fanatical believer in international education like me, RPI is the perfect place to realize my career passion," Li said. "As a pioneer study-abroad program, REACH will not only redefine how to transform the undergraduate educational experience, but will also cultivate a new mindset among students."

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