



# Collaborative program with Nanyang Technological University will promote teaching

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On Feb. 24, officials at Stanford and Nanyang Technological University (NTU) in Singapore signed an agreement to bring Stanford's expertise in environmental engineering to Asia via collaborative teaching and research. The effort uses distance learning to train the Pacific Rim's future environmental leaders and address some of the world's toughest environmental challenges.

"The program gives Stanford an entrée into critical and interesting environmental problems in Southeast Asia, such as challenges to provide clean water and deal with contaminants from industrialization," said James Leckie, the C. L. Peck, Class of 1906 Professor in the School of Engineering, in an interview prior to the signing ceremony. The ceremony took place via video teleconference between Stanford and Singapore, where Leckie was on hand for the signing.

During the ceremony, from an auditorium in the Gates Building, President John Hennessy spoke of the pivotal role of scientific collaboration at Stanford. "Stanford would be a very different institution today if we did not have a history of opening our doors to the world, of exchanging new ideas and research with scholars in other countries, and of sending our students and alumni to study in other nations," he said, pointing out that 14 different nations were represented when the first students registered at Stanford in 1891. Today, more than 58 countries are represented in Stanford's undergraduate population and more than 87 among the university's graduate students. More than half of Stanford's international students are from Asia.

"In the 20 short years since NTU's founding, it has demonstrated a commitment to excellence and to offering the very best education to its students," Hennessy said. "This agreement is an example of that commitment, and Stanford University is proud to be a partner in this effort."

Leckie explained the program's evolution. "Three years ago, professors at Nanyang Technological University approached us to help them develop a first-class environmental engineering and science program," he said. The result is the Singapore--Stanford Partnership (SSP), which is sponsored by Singapore's Ministry of Education and its Economic Development Board and offers master's and doctoral degrees from NTU in environmental engineering.

The partnership is a joint effort of faculty at Stanford's Department of Civil and Environmental

## SR Related Information

- [Stanford Center for Professional Development](#)
- [Leckie's faculty profile](#)



Engineering and NTU's School of Civil and Environmental Engineering. Based in Singapore, but spending up to 25 percent of their time at Stanford, SSP students will interact closely with Stanford students and faculty in the classroom and the lab.

The Stanford Center for Professional Development (SCPD) will coordinate the program's distance-learning components, which will allow SSP students in Singapore to take Stanford classes with real-time interactions among the SSP students, their Stanford counterparts and Stanford faculty.

"This program is a unique blend of a campus and distance-education experience," said Andy DiPaolo, executive director of SCPD and senior associate dean of the School of Engineering. "It will build from Stanford's long history in using technology to deliver academic courses in engineering and science to international audiences." SCPD delivers more than 250 courses via distance-learning technologies.

An initial research focus of the partnership is clean water. A three-year collaborative research program in wastewater reclamation is already in place and involves Stanford Professors Leckie, Martin Reinhard and David Freyberg; as many as 15 research associates, postdoctoral scholars and doctoral students; and their Singapore counterparts. Through this and other ongoing efforts, Stanford researchers and students will have opportunities to work with peers from Singapore and other countries in Southeast Asia.

Singapore's goal is to become a world-class academic center in a range of disciplines and attract top students, particularly from the nations of the Pacific Rim, said Sandy Robertson, a senior engineering research associate at Stanford. SSP students will receive full scholarships from Singaporean government and industry in exchange for a commitment to work in Singapore upon graduation. The requirement will be one year of service for recipients of master's degrees and three years of service for recipients of doctorates.

The master's program creates "an academic year in Singapore that maps to ours," Leckie said. SSP master's students (15 to 20 per year initially) will begin their studies by attending the Stanford Summer Session, where they will take four classes in the Department of Civil and Environmental Engineering. They will return to Singapore for Autumn, Winter and Spring Quarters, taking four, three and two Stanford civil and environmental engineering courses per quarter, respectively. One course each quarter will be taught by a Stanford professor in residence in Singapore. The other courses will be taught from Stanford and transmitted via the Internet using SCPD facilities. During both Winter and Spring Quarters, SSP students will work on a master's project. SSP students completing the program will receive a master's degree from NTU and a certificate from SSP.

SSP doctoral candidates, admitted after earning master's degrees, will be required to work four more years to obtain an NTU doctorate and an SSP certificate. Each year, SSP will admit five doctoral students, who will spend a year at Stanford and have both NTU and Stanford advisers.

