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## Empowering Students: **Encouraging Change at Home and Abroad**

**D**r. Rosalyn S. Hobson's belief that engineering can transform lives in developing countries has taken her all over the world. She has worked to create opportunities for VCU students to learn what it means to practice engineering as global citizens.

In November 2007, Hobson was named the Director of a partnership between VCU and the University of KwaZulu-Natal in Durban, South Africa. In addition to her collaborations with faculty and students at the University of KwaZulu-Natal, Hobson has created connections with three other South African universities: the University of Witwatersrand, the University of Cape Town, and the University of Johannesburg. During one of the collaborative research study programs she spearheaded, Hobson worked with students and faculty to create an automated speech-recognition program for different languages. Another project predicted a person's HIV status based on demographic information.

While on leave from the university, Hobson worked at the U.S. Agency for International Development (USAID) as a High Education Science and Technology Specialist. She traveled extensively, analyzing ways in which engineering could be used to improve health, energy, agriculture, rural development, education and economic growth in some of the world's poorest countries. She also helped facilitate collaborations between the National Science Foundation, the Department of State, the Department of Education, and the American Association for the Advancement of Science to promote STEM

educational activities in developing countries.

Hobson says, "Collectively, there are so many problems—health care, global climate change, energy needs—that we, as global citizens, face."

Short-term research projects, such as the ones Hobson organizes, provide engineering students with an important chance to study abroad. One of her former students, NeKole Varnado, concurs, stating "The experience opened my ideas to the importance of the sustainability of projects and the impact that our designs have on cultures." Her company, IT Engenuity, focuses on projects in sustainability and solving problems related to homelessness in Richmond. She attributes her time abroad as having a major influence on her current career path.

As the Associate Dean for Graduate Studies and Associate Professor of Electrical and Computer Engineering, Hobson has overseen an increase in the number of doctoral and funded students in engineering. She has also helped to establish three new master's degree programs. Hobson has published over thirty peer reviewed conference and journal articles and has presented many lectures and keynote addresses around the world. She has received over 3.2 million dollars in federal and private research funding for projects on which she has served as the principle or co-principle investigator. Hobson's current research involves artificial neural networks and their application to biomedical signal and image processing and biological modeling and improving engineering education.

