NSF Award in Engineering

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- **Project:** REU Site: Bioengineering Education Research
- **Start Date:** September 1, 2009
- **Total Award Amount:** $299,188

**How the results of this project will benefit society:**
This three-year REU site award will provide an opportunity for undergraduate students to do research focused in the area of bioengineering education. Special emphasis will be placed on the recruitment of minority students to enhance the possibility that such students will become excited about research and be motivated to pursue graduate study.

**The problem the project is trying to solve:**
There are very few opportunities for engineering students to learn about educational pedagogy or to do research in engineering education.

**How this project will work:**
This program will build upon the practices established during a successful REU program at the Vanderbilt-Northwestern-Texas-Harvard/MIT (VaNTH) Engineering Research Center for Bioengineering Educational Technologies. Mentors for this REU site program will be selected from Northwestern University, Vanderbilt University, Massachusetts Institute of Technology or the University of Texas at Austin.

The objectives of the program are: (1) to expose students to quantitative and qualitative aspects of research in engineering education, and to expose them to research methods more broadly; (2) to have each student work with a mentor to perform a project that contributes to the development of curricular materials for bioengineering using learning science principles, and/or understand how to evaluate educational innovations for their impact on student learning; and (3) to contribute to real ongoing research projects.

The principal investigator will recruit undergraduate students from bioengineering programs, other fields of engineering and science, or education. Students may also work on middle school and high school outreach projects involving biomedical engineering concepts. In addition to the research projects, students will receive training in communications and ethics in the context of research and advice about preparing for and applying to graduate school.

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