

## A Summer to Remember

The Northeastern University **Young Scholars Program** offers future scientists and engineers a unique opportunity for hands-on experiences while still in high school. This six-week summer program is open to Greater Boston area applicants who have completed their sophomore or junior year in high school. It is a highly selective program, to which hundreds apply and less than 20 are accepted each year.

Students earn \$150 per week working in research laboratories within Northeastern University's Colleges of Arts and Sciences and Engineering. Many assignments work with faculty affiliated with CenSSIS (Center for Subsurface Sensing and Imaging Systems) at Northeastern University. Research assignments of the 2007 YSP included:

- *Development of a Rapid Soil Characterization System;*
- *Tissue Phantoms for biomedical imaging;*
- *Effect of intracellular glutathione levels of thiolated gelatin nanoparticles in smooth muscle and endothelial cells;*
- *Effect of Impact on Mechanical Properties of Metal Matrix Composites;*
- *Novel Magnetoelectric Materials and Devices;*
- *Liquefaction Mitigation Using Entrapped Air*

In addition to a general overview of engineering education, students attend a special seminar series comprised of presentations by Chemical, Civil, Electrical and Computer, Mechanical and Industrial Engineering professors and graduate students. Topics include radar, environmental issues, super-conductivity, lasers, microwave materials, biotechnology, chemical analysis, and robotics. And each Young Scholar participates in college and career counseling.

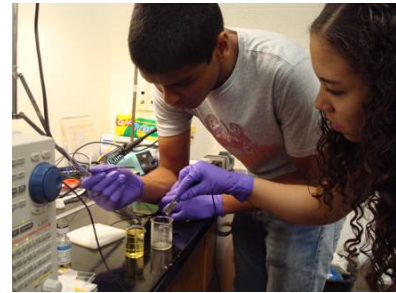
Students are further exposed to the 'nuts and bolts' of careers for scientists and engineers through **field trips** to a variety of corporate and government sites where they see and speak with scientists and engineers in action. Destinations have included Raytheon, Biogen/IDEC, Genzyme, Intel, Harbor Explorations, Massachusetts General Hospital, Woods Hole Oceanographic Institution (WHOI), and the U.S. Army Natick Research, Development, and Engineering Center.

The Young Scholars become acquainted with college life and students at various points in their academic careers, and have access to University recreational and educational facilities.

Northeastern's dedication to encouraging industry-relevant experiences along with classroom education is the major thrust of the program. The University's outstanding facilities and staff, coupled with Northeastern's hands-on approach, provide a challenging opportunity.

Applications for the 2008 Young Scholars Program will be available online in late January 2008.

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*Students work in teams of two or three on active research projects such as Liquefaction Mitigation Using Entrapped Air. Here, students are assisting the lab in their efforts to use entrapped air in the soil to support a structure during an earthquake.*



*A student works on a circuit as his lab (Tissue Phantoms for Biomedical Imaging) is attempting to develop a more efficient and accurate method for detecting cancer.*