

## Henson Medical Simulation Center opens

At the ribbon-cutting of the Richard A. Henson Medical Simulation Center, a \$1 million gift for the center from the Richard A. Henson Foundation, Inc. was announced. The center serves students across disciplines, including nursing and health sciences, as well as community health providers. Under the guidance of faculty, they have opportunities to practice potentially life-saving skills, often involving collaboration and teamwork, in a safe and regulated environment. Through simulation, they develop evaluation and treatment techniques to best care for patients. The \$1.15 million building project is part of SU's ongoing efforts to help reduce the national nursing shortage in the local area and beyond. Offering nearly 5,000 square feet of practical space, the center replicates a medical office, with a waiting room and nurses' station. Featured are four

specialized labs for LDRP (Labor, Delivery, Recovery and Postpartum), neonatal, pediatric and adult care. High-fidelity, computerized, life-like mannequins help replicate demanding and unpredictable clinical situations, allowing students to make real-time decisions and exposing them to a wide range of conditions including premature births, diseases and physical injuries. In a mental health wing, actors serve as "patients" with various psychiatric issues to help students learn effective intervention techniques. Cameras throughout the facility record student interactions for later critique by peers and faculty. The center offers room for growth and expansion with the possible inclusion of lab space for future use by applied health physiology graduate students engaged in fitness, rehabilitation and sports performance analysis.

## S Becomes RE Site

The National Science Foundation selected SU as an official Research Experiences for Undergraduates (REU) site in the fields of computer and information science and engineering. Dr. Enyue (Annie) Lu, Mathematics and Computer Science Department, proposed the \$306,408 project named "EXERCISE: Explore Emerging Computing in Science and Engineering." A total of 24 students from across the country study at SU for three consecutive summers. They explore new parallel programming models such as GPGPU and MapReduce, which allow for complex, simultaneous calculations. Through the interdisciplinary REU program, students pursue individual research projects with help from experienced faculty mentors. All involve using parallel processing systems to quickly solve complex problems. Subjects include analyzing patterns across social networks, reconstructing medical images, increasing function speeds for geographic information systems, and strengthening computer and network security. Visits to NASA's Wallops Flight Facility and Johns Hopkins University's Storage Systems Lab are part of the program. Students also may present research results at regional and national professional conferences.

## Mapping Maryland & Beyond

Geography students (below) are garnering real-world experience through SU's interdisciplinary GNApWorks (Government and Nonprofit Application Development) program. The Nature Conservancy's "Put a Naturalist in Your Pocket" initiative was the first project tackled by the group. Anyone exploring the conservancy's preserves across Maryland and the Washington, D.C., metropolitan area may download audio tour apps created by SU students. The audio tour downloads include geo-enabled trail maps with numbered sites – and mp3 tracks to play at each site. Geography students also assisted the state legislature by creating large, full-color maps of land use in each of Maryland's new legislative districts for all 188 state senators and delegates.

## **STEM @ SU Takes Off**

Several new programs began in the last year thanks to a \$996,303 grant from the National Science Foundation to increase the number of graduates in science, technology, engineering and mathematics (STEM) disciplines. SU hosted the second annual Eastern Shore Regional Tournament of the Maryland Science Olympiad, which included 16 teams of middle and high school students from 10 schools across the region. From launching bottle rockets to modeling proteins, the tournament engages students in science-related topics in fun and competitive ways. Keynoting this year's event was astronaut Richard Arnold II of the

National Aeronautics and Space Administration. SU also invited area high school students to Science Nights @ SU, where they explored various STEM fields with experts who discuss current research and career options. Building on these experiences, the University introduced Science Camp @ SU, a free residential summer program. Students were invited to