Scholarships Available for Students Interested in CSAT Disciplines

The College of Science and Technology (CSAT) is awarding approximately 20 scholarships per academic year through the Bridges and Pipelines program for incoming freshmen who will major in biology, chemistry, computer science and technology, geology, information science and systems, math or physics.

The CSAT was awarded a National Science Foundation Scholarships in Science, Technology, Engineering and Mathematics (S-STEM) grant for $597,427 in January to provide the Bridges and Pipelines Scholarships.

The average amount of each scholarship averages $2,800, and scholarships are renewable up to four years. The priority deadline to apply for the scholarships is March 1, and the regular application deadline is May 1.

Several scholarships are set aside for students who have participated in related, pre-college partner programs such as RU’s Summer Bridge Program, Project Discovery, Appalachian Arts and Studies in the Schools, 4-H organizations in Southwest Virginia and New River/Mount Rogers Workforce Investment Board Youth Council.

To apply, students must have at least a 2.5 GPA from high school or a community college; major in biology, chemistry, computer science and technology, geology, information science and systems, math or physics; apply and qualify for need-based support per federal requirements (FAFSA); and apply and be accepted to Radford University. Students are strongly urged to apply for the scholarships before the March 1 deadline.

To maintain the scholarship, students must maintain a 2.5 GPA in their respective major demonstrate progress toward earning a leadership certificate and participate in events and presentations organized by the CSAT STEM Club.

National Scholarship Opportunities Available for CSAT Students

Scholarship opportunities are available for students in CSAT disciplines. The following is a list of scholarships and their corresponding web addresses for more information.

The Barry M. Goldwater Scholarship is targeted to students who intend to pursue careers in mathematics, the natural sciences or engineering.

RU is eligible to nominate up to four students for this $7,500 scholarship. To be considered for nomination as a Goldwater Scholar, a student must be a full-time sophomore or junior, have a “B” GPA, be in the upper fourth of their class, and be a U.S. citizen, permanent resident or U.S. national.

www.act.org/goldwater/

The Morris K. Udall Undergraduate Scholarship is offered to full-time sophomores or juniors who have demonstrated commitment to careers related to the environment. Students must have at least a “B” GPA and be a U.S. citizen, U.S. national or U.S. permanent resident. This $5,000 scholarship may be used for tuition, fees, books, room and board or other specifically approved expenses.

www.udall.gov/

The Virginia Urban Forest Council Student Scholarships are open to full-time graduate and undergraduate students who are studying urban forestry and related curricula at Virginia colleges. Students must successfully have completed at least one academic year of courses in forestry, horticulture, environmental science, and... Continued on page 2
Scholarship Opportunities (continued)

biology, landscape architecture or geography and possess an overall GPA of 2.5 or greater.
www.treesvirginia.org/

Virginia Council of Teachers of Mathematics 2009-2010 Scholarship Program offers two $2,000 scholarships annually to students interested in becoming teachers of mathematics. Students must be full-time students who are Virginia residents, currently enrolled in a degree-seeking program with a concentration or major in mathematics, graduating in Fall 2009 or Spring 2010, and planning to teach in a Virginia school upon graduation.

www.vctm.org/scholarship.htm

The Developing Global Scientists and Engineers (IRES) program provides international research experiences for U.S. students. For more information, visit http://www.nsf.gov/pubs/2004/nsf04036/nsf04036.htm

Undergraduate Research and Mentoring in the Biological Sciences (URM) program’s goal is to increase the number and diversity of individuals pursuing graduate studies in biological research supported by the NSF Directorate for Biological Sciences.

www.nsf.gov/funding/pgm_summ.jsp?pims_id=500036

Research Experiences for Undergraduates (REU)
For more information, visit www.nsf.gov/funding/pgm_summ.jsp?pims_id=5517.

Chemistry Faculty Chair Symposium at National Conference

Professor Emeritus of Chemistry Robert K. Boggess and chemistry faculty member Cindy Burkhardt organized and chaired a day-long symposium entitled "National Science Foundation Catalyzed Innovations in the Undergraduate Chemistry Curriculum" during the division of chemical education program at the 238th National Meeting of the American Chemical Society in Washington, D.C, in August.

The symposium discussed innovations in undergraduate chemical education. Speakers were recent recipients of Adaptation and Implementation and the current Phase I awards of the Course Curriculum and Laboratory Improvement Program of NSF. The National American Chemical Society meeting included 14,000 participants and offered oral presentations, poster sessions, educational courses, workshops, a career fair and exposition.

Chemistry Faculty Member Published in Prestigious Journal

Chemistry faculty member Tim Fuhrer co-authored an article “89Y and 13C NMR Cluster and Carbon Cage Studies of an Yttrium Metallofullerene Family, Y3N@C2n (n=40-43)” in the Journal of the American Chemical Society. The official journal reference follows.

Math Alumna Sparks Love of Math in Students

When RU math education alumna Heather Lineberry discussed the upcoming standards of learning tests with her students at Grayson County High School, she said that the tests would be challenging but knew they all would pass. Her students studied algebra all year and were excited at the challenge the SOL presented. “At the beginning of the year, I asked them what type of reward they wanted if they all passed the SOLs at the end of the year; they replied that they would want a party with food from KFC,” says Lineberry.

Upon completion of the SOL testing, all of Lineberry’s students passed the SOLs and two of them earned a perfect 600 score. “On the last day of school we had a big party with fried chicken, mashed potatoes and biscuits. I was so proud of the students,” Lineberry says.

Lineberry says that the key to piquing students’ interest in math is applying it to real-world activities. “Sometimes my students ask me if they’re ever going to use what they are learning in class in the real world,” she adds. In class, Lineberry discusses how throwing a baseball or kicking a football creates a parabolic curve and uses the school’s stairway and rulers to measure the steepness or slope. “I love to show them how math is applicable to daily situations,” she says.

The Fries, Va. native is living her dream of teaching at Grayson County High School, from which she graduated as Valedictorian in 2003, and following the footsteps of some of her most favorite people.

“Many of the teachers whom I have looked up to in the past were RU alumni,” she says. This encouraged her to explore Radford after she earned associate degrees in science and education from Wytheville Community College. “I decided to come to RU because of the strong emphasis in education. In high school, I had a series of math teachers who were amazing. They started to build my curiosity about math,” she adds.

Once Lineberry enrolled in RU, she jumped into campus life with both feet. She was an admissions representative who conducted tours for prospective students, and was able to meet a lot of new students. She also worked for the alumni affairs office as an RU Ambassador and helped with events on campus. In addition, Lineberry served as a peer instructor for Calculus I and as secretary and president of the RU Math Club.

The Math Club offered Lineberry opportunities to collaborate and socialize with other math students and faculty in the department.

“The math faculty and students seemed more like a family. If you have a question, the faculty members are there for you. We also spent a lot of time in the math student lounge in Walker Hall preparing for exams. Our professors would stop by to help with challenging proofs or just join us in the camaraderie,” adds Lineberry.

Lineberry feels very connected to her alma mater and is proud to talk with her students about the college experience. “On Fridays, I wear my Radford University T-shirts to school as a way to encourage my students to begin thinking about attending college. I am a first generation college student and I understand the importance a college education has on achieving your dreams and goals” says Lineberry.

Math Student Will Present at Chalk Talks Sept. 24 and Conference in October

Mathematics major Catherine Inman will be presenting her research “Creation of Educational Hypermodels using Mathematica” on Thursday, Sept. 24 at 5 p.m. in Reed Hall, room 206. This event, organized by biology faculty member Gary Cote, is a part of the Chalk Talks series which offers students an opportunity to talk about their research in front of peers and college faculty in an informal environment. This is the second year the College of Science and Technology is hosting this resource for students.

In addition to Chalk Talks, Inman and her faculty advisor John McGee will present this research at the International Mathematica User’s Conference in Champagne, Ill. “This is Inman’s first experience presenting at a major conference, with obvious career benefits,” adds McGee.

The work was conducted as an independent study this summer and examines the use of software to create a dynamic visual model of a system based on mathematical equations with one or more parameters. Using the model, a learner can manipulate the parameters, receive immediate visual feedback, and answer computer generated questions. The software can analyze learners’ responses and provides feedback to help them assess and correct their understanding of the material.
The College of Science and Technology’s STEM Club hosted the fall picnic Wednesday, Sept. 9 in Bisset Park. Many faculty, staff and students attended despite the threat of rain and a few showers. The club is planning a spring picnic. Stay tuned for more information about upcoming CSAT STEM Club events and meetings.