Delivering on the land-grant promise, now more than ever
Students learn best and society benefits most when the university community engages in the world around it.
About the cover:
War Memorial Hall during graduation ceremonies in the 1920s and as it looks today.

This page:
The Rolls Royce jet engine in the new Signature Engineering Building is representative of the way Virginia Tech works with private industry and regional government to accomplish its land-grant mission.
On July 2, 1862, President Abraham Lincoln signed the first Morrill Land-Grant Act, and in doing so forever changed the shape of higher education in America, which improved the lives of millions of people over the years. He also laid the foundation that led to the establishment of what became Virginia Tech.

Before land-grant universities, higher education was expensive and exclusive, available to a comparative handful of society’s elite. Generally, colleges were designed to train men to join the clergy, and instruction was based on a classical curriculum focused on Latin and Greek. In the early 1800s, some schools expanded, but a college education was still out of reach for most Americans.

Today, millions of students have the opportunity to pursue higher education. Expanding from a first-year class enrollment of 132 students in 1872, Virginia Tech now provides education for more than 30,000 students annually. And 150 years after Lincoln’s stroke of the pen, our university is more dedicated than ever to teaching and learning, research and discovery, and outreach and engagement.

Fulfilling that tripartite mission requires continuous innovation to find better ways to accomplish goals, improve facilities, and recruit topnotch faculty and staff.

In 2011-12, the university improved the way it delivers learning, both in the brick-and-mortar and electronic classrooms. Education and research are more interdisciplinary than ever, and Tech has had to invent new ways to cross boundaries. One example is the Scineering program that cross-trains engineers and scientists. In a less traditional “classroom,” the university also achieved distance-learning milestones and won recognition for some of its online offerings. In addition, the university is continuing to establish smaller learning and social communities.

Research expenditures at Virginia Tech soared from $398 million to $450 million in the latest figures announced during 2011-12. The university formed centers or groups for drug discovery, tire research, and 21st century studies, while continuing important work in such areas as infectious disease, computers, and robotics.

In numerous ways, communities and their citizens depend on the advancements offered by land-grant institutions. In 2011-12, Tech made strides in bolstering economies through a merger and expansion of VT KnowledgeWorks and an increased presence in localities across the state. Virginia Cooperative Extension continues to touch the lives of millions and is now expanding that effort through easily available ebooks.

Virginia Tech recognizes that economic times and a decline in some traditional sources of funding mean that even an accessible education like ours remains a reach for too many. As a result, fundraising is now even more essential. In fall 2011, we were proud to announce that the recently completed Campaign for Virginia Tech: Invent the Future had raised $1.11 billion. At the same time, the Virginia Tech Foundation was recognized for its excellence in managing and increasing those precious assets, and an internal analysis prepared for the university board of visitors showed that Virginia Tech’s administrative costs are low compared to its peers and other state institutions.

Land-grant colleges like Virginia Tech were built on the notion that higher education should take new knowledge and apply it to critical needs of the times, so they developed curricula responsive to the needs of industry, agriculture, and society. As seen in Blacksburg, disciplines and fields of study continue to evolve, grow, and emerge. We also know that students learn best and society benefits most when the university community engages in the world around it.
In its earliest days, Virginia Tech emphasized agriculture and the “mechanic arts,” but quickly adapted to an ever-evolving world. Now, we prepare students to learn for a lifetime and to compete in a global marketplace.

Part of that global perspective involves educating students and citizens through distance learning using electronic means. Tech has been a regional leader in this field for years, and during 2011-12 hit a milestone of more than 200,000 distance-learning enrollments since 1999. The university’s distance-learning portfolio includes 38 graduate degree and certificate programs, 55 undergraduate core courses, and 823 unique undergraduate and graduate courses. Those course offerings accounted for 24,356 credits of eLearning enrollments at the undergraduate and graduate levels during 2011-12. Now, 100 percent of the university’s academic departments are engaged in developing and/or delivering courses at a distance.

“Online and blended course offerings positively impact capacity issues, while strengthening opportunities and access through distance learning,” said Peter Macedo, director of the Institute for Distance and Distributed Learning. “At the heart of Virginia Tech’s land-grant mission is a commitment to provide a rich learning experience for students. Expanding access to a quality education is one of the key tenets in this mission, including enabling current students, many of whom are taking online courses as part of their bachelor’s and master’s degrees, to pursue additional learning opportunities before and after graduation.”

U.S. News & World Report recognized Tech’s online excellence by honoring one of its online programs, the master’s degree in information technology, as among the nation’s best in its 2012 Top Online Education rankings. Run jointly by the College of Engineering and the Pamplin College of Business, the degree ranked highly in the categories of Teaching Practices and Student Engagement, Faculty Credentials and Training, and Student Services and Technology.

“Today, all of our courses are available online and students from several states in the U.S., along with those from many foreign nations participate online in this program,” said Parviz Ghandforough, professor with the Department of Business Information Technology and managing director of the program.
In another example of its online offerings, Tech is the first four-year comprehensive university in Virginia to offer both the human anatomy and physiology lab and lecture through distance learning.

“This is an exceedingly popular course with heavy enrollment of students from diverse disciplines, including human nutrition, foods, and exercise; biological sciences; psychology [and] sociology; biochemistry; chemistry; human development; and even engineering,” said S. Ansar Ahmed, head of the Department of Biomedical Sciences and Pathobiology in the Virginia-Maryland Regional College of Veterinary Medicine.

In 2011, Michael Herndon, director of University Summer Sessions, partnered with IDDL’s instructional designers to prepare the class for online delivery.

Terri Gillian, an instructor in the Department of Biomedical Sciences and Pathobiology in the Virginia-Maryland Regional College of Veterinary Medicine, agreed to teach the course, but because she was one of the first of her peers to do so, she could not draw upon the experience of others. “Before starting the course, I was worried about all the potential problems that could arise in launching a new online class of such a large size. For the most part, everything went very smoothly.”

Communities help produce scholars

On campus, educators are working to enhance learning through interdisciplinary programs that defy almost all traditional boundaries and by creating communities of all sorts that foster camaraderie.

In one example, thanks to a $1.4 million science education grant from the Howard Hughes Medical Institute, undergraduates across campus are becoming “scieneers.” College of Science students work with research mentors in the College of Engineering, while College of Engineering students are mentored in the College of Science. All of these students complete a Scieneering minor in integrated engineering and science with curricula tailored to introduce students to the “other” discipline.

Scieneers can also declare a minor in science, engineering, and law, built upon the College of Science’s longstanding program in intellectual property and patent law. Students work with intellectual-property lawyers or technology-transfer specialists in the practice of documenting new ideas and inventions of scientists and engineers and protecting the legal rights to these intangible properties.

Scieneers, as well as other students majoring in any of Virginia Tech’s science, technology, engineering, or math (STEM) programs, can also live in a residential community where they can interact, live, learn, and grow together across scientific disciplines.

The inVenTs living-learning community for STEM majors is in Lee Hall and houses all students who have applied for and been accepted into one of the university’s four independent STEM living-learning communities — DaVinci: The Biological and Life Sciences community; the men’s engineering community Galileo; the women’s engineering community Hypatia; and the Curie community for the physical and quantitative sciences.

The four communities within inVenTs retain separate identities, but have access to shared programming, activities, and classroom space in the building, as well as access to faculty, academic administrators, student affairs staff, and other students who can offer ideas, encouragement, and collaboration across various disciplines.

Science, technology, engineering, and mathematics education has to start at a young age.

“We’re really excited to be able to bridge the four communities,” said Associate Dean of Science Jill Sible. “One of our real strengths is the collaborations that occur across disciplines. Some of the most exciting discoveries have been made when faculty from science and engineering and other places are working together, so we want our students to really be a part of that culture.”

The inVenTs community is one part of an effort across Virginia Tech to merge the academic and social worlds of students so that intellectual development occurs in all areas of their lives. Tech also opened its second residential college, this one in West Ambler Johnston (the first was the Honors Residential College at East Ambler Johnston), where residents have upgraded facilities, including air-conditioned rooms, as well as common spaces like lounges, classrooms, meeting
spaces, a theater, a library, and a fitness area. Each hall also has a live-in faculty principal.

“The residential college model of housing is an attractive option for students seeking a unique experience that integrates student and academic life in the context of a rich living community,” said Associate Vice President for Student Affairs Frank Shushok Jr.

Tech also applied that community model to a new dining facility, Turner Place at Lavery Hall. The mixed-use facility includes new restaurant-style dining options, such as a Japanese steakhouse, a European café, and a Southern-style steakhouse and restaurant.

The Turner Street facility is also designed to give the university’s oldest tradition, the Corps of Cadets, an even-higher profile with a 256-seat regimental dining room decorated with artifacts, photos, and paintings that emphasize Tech’s heritage (the traditional corps dining space, Shultz Hall, is now part of the Center for the Arts at Virginia Tech, which is under construction). Four days a week, corps units meet for dinner, which helps build camaraderie and team spirit.

“We appreciate the opportunity to bring the history of the corps into the facility,” said Corps Commandant Maj. Gen. Randal Fullhart.

Nuclear engineering returns

In another move to adapt academics to national needs, the Virginia Tech Board of Visitors approved master’s and doctoral degrees in nuclear engineering. The proposal was sent to the State Council of Higher Education for Virginia for confirmation.

The College of Engineering revived its nuclear engineering program in 2007 and soon started offering graduate course work that allowed a student to earn a master’s of engineering degree in mechanical engineering with a nuclear certificate.

“With the critical demand for energy by our nation and the world, we were pleased to renew our concentration on nuclear engineering,” said Richard C. Benson, dean of the College of Engineering.

In 2009, Virginia Tech’s nuclear engineering program received approximately $850,000 from the Nuclear Regulatory Commission for faculty development and for fellowships.

Recognizing the best

Faculty members, researchers, and students who excel at teaching and learning earn various awards or are recognized for their abilities in other ways. Following is just a sample from 2011-12:

NSF supports fluid motions researcher

In the eight years since receiving his Ph.D. from the California Institute of Technology, Shane Ross, now an assistant professor of engineering science and mechanics at Virginia Tech, has focused his career on developing better engineering tools to understand and predict fluid motions.

Based on his activities and ideas, the National Science Foundation awarded Ross one of its coveted 2012 CAREER Awards, valued at $420,000 over the next five years.

In engineering, a dynamical system has a multitude of meanings. Fluid flow in the human body is considered to be such a system, as well as pollution and pathogens that travel through the air. Even the motions of a basketball team or the shuffle of dollars through the economy constitute a dynamical system.

What often appears to be a random flow of particles can be characterized more effectively, allowing scientists and engineers to have a better understanding and control over such areas as the airborne spread of disease agents, Ross said.

“Many fluid flows have a transport network that may not be obvious. By eluci-
Dove elected to prestigious academy

Patricia M. Dove, the C.P. Miles Professor of Science in the Department of Geosciences in the College of Science, was elected a member of the distinguished National Academy of Sciences (NAS) for her sustained excellence in original scientific research. Membership in the NAS is one of the highest honors given to a scientist in the United States.

Dove is truly one of today’s pre-eminent geochemists, making major contributions to research in the biogeochemistry of Earth processes, the physical basis of biomineralization, and geochemical controls on geophysical properties.

“Dr. Dove’s pioneering research has helped put the university on the academic map nationally and internationally, and her outstanding teaching has been a draw for exceptionally talented graduate students and junior faculty,” said Virginia Tech Senior Vice President and Provost Mark G. McNamee.

Dove’s publications have been cited more than 3,000 times. She received the Geochemical Society’s Clarke Medal in 1996, and on two occasions earned the U.S. Department of Energy’s Best University Research Award. She is a Fellow of the American Geophysical Union, the Geochemical Society, and the European Association of Geochemistry. Dove earned her bachelor’s and master’s degrees at Virginia Tech and her Ph.D. from Princeton University.

Junior faculty member gets boost

Vito Scarola, assistant professor of physics, was named a Young Faculty Award winner by the Defense Advanced Research Projects Agency (DARPA). The program allows junior faculty members broad latitude to explore scientific advancement in a particular research area.

“This is a very prestigious honor,” said Beate Schmittmann, chair of the physics department.

Out of 407 applicants this year, 39 of the nation’s brightest young scientists were selected to receive grants totaling $11.7 million.

Scarola’s research in theoretical physics explores the fundamental properties of quantum materials. “The ability to understand and harness quantum matter, for example, superconductors and quantum magnets, offers opportunities for new technologies but poses challenging theoretical problems.” Scarola said.

More faculty recognition

Yili Hong, assistant professor of statistics in the College of Science, was named a DuPont Young Professor for 2011. Hong was one of only 18 such professors named from 11 U.S. and six international universities. Hong’s areas of research are statistical reliability, industrial statistics, survival analysis, and biostatistics.

Faculty in the hospitality and tourism management department of the Pamplin College of Business are among the world’s top scholars in the discipline, according to a study in the Journal of Hospitality & Tourism Research. Distincting hospitality and tourism as two separate disciplines, the study identified the 50 most prolific authors and institutions worldwide in each discipline, as well as the top 100 authors and universities in the combined field. The rankings are based on the number of article contributions in the disciplines’ six most influential research journals in the 2000-09 period. In the institutional rankings, Virginia Tech was seventh in hospitality research, 11th in tourism, and eighth in the combined field.

Biomedical engineer Marissa Nichole Rylander, an associate professor jointly appointed in the mechanical engineering department and Virginia Tech – Wake Forest University School of Biomedical Engineering and Sciences, received the 2012 Y.C. Fung Young Investigator Award from the American Society of Mechanical Engineering’s Bioengineering Division. Rylander, who joined the Virginia Tech faculty in 2006, is conducting novel research in nanomedicine, cancer engineering, and tissue regeneration. Her innovative research combining nanotechnology, laser therapy, and dynamic imaging to study tumor progression and to develop novel cancer treatments led to the National Science Foundation naming her one of its CAREER Award recipients in 2010.

Robert Dunay, the T.A. Carter Professor of Architecture in the School of Architecture + Design, was named one of the 25 Most Admired Educators of 2012 by DesignIntelligence. This is the third time that Dunay, who is also the director of the Center for Design Research, has received this recognition.

Pablo Sobrado, assistant professor of biochemistry, was awarded Costa Rica’s
2011 National Technology Prize, administered by the nation’s Ministry of Science and Technology. The jury noted that Sobrado’s research is a significant contribution to the diagnosis and treatment of infectious and tropical diseases that currently affect more than 20 million people worldwide.

Dr. X.J. Meng, a virologist in the Virginia-Maryland Regional College of Veterinary Medicine, was elected a Fellow of the American Academy of Microbiology. Meng, a professor of molecular virology in the Department of Biomedical Sciences and Pathobiology, researches emerging and re-emerging viral diseases that impact veterinary and human public health. Meng developed the first vaccine fully licensed by the U.S. Department of Agriculture to protect against porcine circovirus type 2 infection and its associated diseases, which constitute a major threat to the global swine industry.

Her experience with creative expression has paved the way to India, where she will conduct her Fulbright research. Faut’s project, titled “Bhiti Chitra: The History and Applications of Murals in South India,” seeks to explore the connections between the pressures of society, spirituality, and expression.

“I will be looking at the history of mural painting in South India, and comparing my findings to contemporary mural projects in Bangalore,” said Faut. The city of Bangalore has launched an arts program that aims to cover nearly every building face in the city with murals. During her year in Bangalore, Faut said she plans to examine how the city is accomplishing the project from an arts administration perspective and analyze how South Indian identity is articulating itself through contemporary public art as compared to the ancient art in nearby areas.

Goldwater recipient

Winston Becker, of Advance, N.C., a sophomore honors student majoring in engineering science and mechanics in the College of Engineering, was awarded a Barry M. Goldwater Scholarship for the 2012-13 academic year. Becker is also pursuing minors in interdisciplinary engineering and science, chemistry, and mathematics.

Becker is among 282 scholarship winners from a field of 1,123 mathematics, science, and engineering students who were nominated by the faculties of colleges and universities nationwide. “I have been very impressed by the dedication and quality of work I have seen from Winston,” said Raffaella De Vita, assistant professor in the Department of Engineering Science and Mechanics, who has been a mentor for Becker. “He is an outstanding student who will make an impact in the biomedical engineering field.”

In October 2011, Becker presented research at the Biomedical Engineering Society National Meeting and the 63rd Annual Southeast Regional Meeting of the American Chemical Society. Earlier, his research was part of a presentation at the 12th Pan American Congress of Applied Mechanics in Trinidad.

Stephanie Nicole “Nikki” Lewis, of Newport News, Va., a graduate student in Virginia Tech’s interdisciplinary doctoral program in genetics, bioinformatics, and computational biology, received the prestigious Ruth L. Kirschstein National Research Service Award for Predoctoral Research from the National Institutes of Health. The award is for her study of a cellular signaling receptor that is associated with chronic inflammatory diseases, such as diabetes, obesity, and inflammatory bowel disease.

Teamwork sparks accomplishments

Teamwork and collaboration have become essential in teaching and in learning. Virginia Tech students teaming together brought home a number of awards and recognition in 2011-12.

- Members of the Virginia Tech Rescue Squad placed first in the Advanced Life Support Skills competition at the National Collegiate Emergency Medical Services Foundation Conference. Members of the team included Jeff Jones, of Chesapeake, Va.; Patrick McGuire, of Hebron, Conn.; Robert Stephens, of Fairfax Station, Va.; and Ryan Steves, of Warrenton, Va. By winning the event, the squad qualified to compete in the Journal of Emergency Medical Services Games.
• A team of Virginia Tech soil science students won the National Collegiate Soil Judging Championship in Morgantown, W.Va. “This is the Final Four of soil science competitions,” said John Galbraith, an associate professor in the Department of Crop and Soil Environmental Sciences in the College of Agriculture and Life Sciences who coached the team. The Virginia Tech Soil Judging Team beat out 20 other teams and more than 125 contestants. It marks the fourth time that Tech has taken home the prestigious trophy.

Chris Heltzel, of Maurertown, Va., won third place in the individual competition; Kelly McMillen, of Chesapeake, Va., took sixth; and Heather Taylor, of Blacksburg, Va., placed 10th.

• For the third consecutive year, a team of doctoral students of the College of Engineering’s Department of Computer Science and Center for Human-Computer Interaction won first place in the 3-D User Interfaces contest. The competition required students to build a computer application that allowed two users to navigate through a complicated 3-D environment without any direct verbal communication. Team members were Felipe Bacim, of Porto Alegre, Brazil; Eric Ragan, of Pittsburgh, Pa.; Siroberto Scerbo, of Elizabeth City, N.C.; and Cheryl Stinson, of Ottawa, Ontario, Canada.

• Three students from the Department of Mining and Minerals Engineering took first place in Carlson Software’s National Senior Mine Design Competition, marking the fifth straight year Virginia Tech students have won the prominent competition. Seniors Erich Dohm, of Gainesville, Ga., and Wilson Lin and Jason Yeager, both of Manassas, Va., won this year’s event with their project titled “Flat Creek Quarry,” a proposed greenstone hard rock quarry located in Virginia’s south central Piedmont region.

• For only the second time in more than 40 years, there was a tie for first place at the National Intercollegiate Dairy Cattle Judging Contest when the Virginia Tech team tied with the team from Cornell University. After the tiebreaker, Tech ended up second. Team members were Carissa Doody, of Union Bridge, Md.; Cody Pearson, of Millbury, Mass.; Austin Schwartzbeck, of Union Bridge, Md.; and Jason Zimmerman, of Littlestown, Pa. All four placed in the top 25 as individuals, the first time that’s happened for Tech since 1998.

• A Pamplin College of Business team comprised of Kristina Kelly, of Vinton, Va., and Nick Wells, of Danville, Va., took first place at the National Sales Challenge, organized by the Russ Berrie Institute for Professional Sales at William Paterson University. In addition to the first-place team award, Kelly took first place in the overall individual competition and second place in the speed-selling contest, one of the sales challenge’s two events.

• What started out as a class project for four Virginia Tech seniors and aspiring financial planners turned into one of the most rewarding experiences of their college careers when they won the 2011 iOME Challenge competition. The annual event encourages the 80 million members of the millennial generation to help solve America’s retirement problem. Students Allison Perdue, of White Hall, Md.; Paula Craun, of Bridgewater, Va.; Jamie Kerr, of Richmond, Va.; and Matt Maranowski, of Pittsburgh, Pa., began working on their award-winning submission as part of a project in Assistant Professor Hyrum Smith’s retirement-planning class in fall 2011.
Virginia Tech could never deliver on the fundamental tenets of its land-grant promise now or in the future without professionals who devote years of leadership and dedication to help shape and expand the university. Four individuals who served the university for a total of 137 years in leadership roles announced in 2011-12 that they would be retiring.

The university will miss the guiding hands of Ray Smoot (English ’69, M.S. educational administration ’71), CEO of the Virginia Tech Foundation and university treasurer; Erv Blythe (English ’68, M.U.A. urban affairs ’83), vice president for information technology and chief information officer; Jim Bohland, vice president and executive director of the National Capital Region; and Ed Spencer, vice president for student affairs.

**Raymond D. Smoot Jr.**

Smoot was a leader from early on, serving as Student Government Association president his senior year. Following graduation, he quickly became a valued assistant to then-Vice President for Administration Stuart Cassell, and eventually assumed responsibilities in general administration and services, business affairs, and oversight of the Virginia Tech Foundation.

“Ray has proved to be a valuable leader, administrator, and business executive in many roles across his four-decade association with the university and its foundation. He has been at the center of many university successes,” said Virginia Tech President Charles W. Steger.

During his years of stewarding the foundation, its assets grew from $11 million to more than $1.3 bil-
lion, a figure that is built upon high-profile regional real estate, strategic partnerships for economic and civic development, and a significant increase in scholarship aid for students. The physical campus also grew, both in numbers of buildings and in total acreage.

Smoot bolstered the university’s outreach mission through economic and civic development. He forged a closer relationship with the Roanoke Valley in numerous ways, including the restoration and expansion of the Hotel Roanoke, a gift to the foundation. Other notable efforts include the Virginia Tech Corporate Research Center, the Virginia Tech Research Center – Arlington, and the Pete Dye River Course of Virginia Tech.

Earving L. Blythe

Blythe entered Tech as a member of the Corps of Cadets in 1963; he joined the administration in the late 1970s. Since the early 1990s, he has served as a leader and pioneer in policy development and strategic planning related to information technology and services in a university whose students and faculty were rapidly becoming dependent on evolving technology in software and hardware.

Partnering with the College of Engineering, Blythe’s team developed the revolutionary System X supercomputer, which, with a 2004 update, was the fastest university supercomputer in the world. Also under Blythe’s leadership, the Faculty Development Institute was created and became a model that was widely adopted by other universities for expanding faculty members’ use of instructional technology.

“Erv has been a towering leader in higher education computing and information technology,” Steger said. “He leaves the university on excellent footing. His innovations and leadership have well served Virginia Tech, particularly his support of research computing and advanced network infrastructure and applications.”

Blythe not only led initiatives that supported Tech’s advanced research, he also took the university’s dedication to outreach to heart. He was the catalyst for Tech’s highly acclaimed Blacksburg Electronic Village, making Blacksburg the first community in the world where Internet access was opened to the public, and he has devoted considerable attention to eCorridors, a statewide program to help regions and communities develop the economic potential of broadband-infrastructure technology.

James Bohland

Bohland joined the faculty in 1980 as professor and chair of the urban affairs and planning program, and later served as founding director of the School of Public and International Affairs. In the early 2000s, he served as interim provost. During that period, he approved the initial idea for the Institute for Critical Technology and Applied Science, a concept that has extended across the university to engage multidisciplinary research and facilities designed specifically for such collaboration. Bohland also helped establish Virginia Tech’s partnership with Wake Forest for the joint School of Biomedical Engineering and Sciences.

In 2002, Bohland was named vice president and executive director of National Capital Region Operations. He and his team in Northern Virginia were responsible for the development and implementation of new strategic directions in resilience, security, sustainability, health, and technology. Perhaps his most important accomplishment was the opening of the Virginia Tech Research Center – Arlington.

“Dr. Bohland has been an outstanding faculty member and administrator at Virginia Tech for more than three decades,” Steger said. “His calm demeanor belies his dynamic vision and leadership, which have been especially important in helping us enhance our programs and presence in the National Capital Region.”

Edward F.D. Spencer

Spencer joined the university in 1983 and most recently served as vice president for the Division of Student Affairs. He has served as director of residential and dining programs, as both an assistant and associate vice president for student affairs, and as an associate professor in the School of Education’s graduate program in higher education.

“Ed’s agenda every day is what is best for our students, giving them the richest possible Virginia Tech experience,” Steger said. “Students for years to come will greatly benefit from the many outstanding programs he has helped establish.”

Significant among Spencer’s accomplishments was his leadership in building a dining program that is consistently ranked among the top in the nation. The Oak Lane Community for fraternity and sorority housing was developed under his planning and guidance during the past 30 years, and a fourth phase is currently under construction. Another innovation in student affairs under his leadership was the introduction of living-learning communities and co-ed residence halls. Under Spencer, student-volunteer programming soared, resulting in thousands of students participating in such campus programs as the Big Event service day and Relay for Life.
Tech police officer dies in line of duty

The university mourned the loss of Virginia Tech Police Officer Deriek W. Crouse, who was shot to death on Dec. 8, 2011, while on duty.

Crouse, 39, of Christiansburg, Va., joined the Virginia Tech Police Department on Oct. 27, 2007, and served in the patrol division. He received his law enforcement certification on Feb. 12, 2008, from the Cardinal Criminal Justice Academy. He was trained as a crisis intervention team officer, general instructor, firearms instructor, and defensive tactics instructor. Crouse had been a member of the Virginia Tech Police Emergency Response Team since February 2011. He received an award in 2008 for his commitment to the department’s Driving Under the Influence efforts.

Crouse was sitting in his vehicle near McComas Hall when a man later identified as Ross Truett Ashley, 22, of Partlow, Va., approached and shot him. Ashley, a part-time Radford University student who had stolen a car in Radford the day before, fled the scene and then killed himself in the “Cage” parking lot after being spotted by an officer.

The board of visitors officially honored Crouse in March 2012.

The year in giving

Virginia Tech’s supporters gave nearly $76.2 million in fiscal year 2012 – the first year outside of a university-wide campaign since 2003.

Several colleges and university programs received significantly more philanthropic support than in the previous fiscal year, including University Libraries, which saw a threefold increase in donations; Athletics, which achieved its highest fundraising total to date; and the College of Natural Resources and Environment, which doubled its contributions over fiscal year 2011.

The Office of Annual Giving — which directs telephone, direct-mail, and email fundraising — also raised a record amount, and the funds brought in will benefit numerous areas throughout the university.

Another highlight of the fundraising year was the large increase in direct giving by corporations (nearly 13 percent) and foundations (more than 21 percent).

Contributors played an important role funding the Signature Engineering Building and the Center for the Arts at Virginia Tech — two projects that are transforming the northern end of main campus.

Although donations made after the start of fiscal year 2012 did not count toward the $1 billion goal of The Campaign for Virginia Tech: Invent the Future, the campaign-closing ceremony was held in November 2011, where it was announced that the university had raised $1.112 billion. To put this historic achievement in context, the university’s last comprehensive campaign, Making a World of Difference, which concluded in 1998, raised $337.42 million, approximately $470 million in today’s dollars.

The university’s endowment, managed by the Virginia Tech Foundation, grew by 81 percent during the campaign, thanks to gifts and investments. The endowment stood at $600.65 million as of the end of the campaign.

In fact, the foundation has proven to be such a good steward of university resources that it received the 2011 Award for Excellence for Mid-size Nonprofit of the Year from The Foundation and Endowment Intelligence Daily (FEI). FEI cited an endowment performance over the past several years that placed the foundation “solidly in the top quartile of performers” and for having made several tactical moves that earned the endowment a 19.6 percent return for fiscal year 2011.

The community also mourned the death of Charles M. Forbes ’49 — Virginia Tech’s first vice president for development and university relations — who foresaw that the university’s future would require private support and as a result established fundraising as a major driver of new initiatives at his alma mater. He was 84.

Forbes was the architect of The Campaign for Excellence, Virginia Tech’s first national fundraising campaign, which generated $118 million and helped increase the value of assets held by the Virginia Tech Foundation from less than $8 million to more than $123 million. He earned a bachelor’s degree of industrial engineering and operations research in 1949. After working as an engineer for DuPont, Forbes entered the fundraising and communications business.

“Charlie Forbes had an infectious passion for improving his alma mater, and he was a master at sharing that with our alumni and friends,” Virginia Tech President Charles W. Steger said. “During his time here, philanthropy truly became a major driver of our success.”

Forbes served as vice president until 1992, when he became vice president for development and alumni relations at the University of Delaware. He retired in 1996.
The university is often at the forefront of research into problems or topics that have gained the attention of a large part of the public. One such challenge is the life-threatening blast-induced injuries faced by our soldiers in countries such as Afghanistan.

The Virginia Tech–Wake Forest Center for Injury Biomechanics was awarded a Phase 3 $3.5 million contract from the U.S. Army Medical Research and Material Command to research head, neck, and chest injuries in military personnel. The research plan integrates experimental testing with computational modeling to reduce injuries and fatalities for soldiers.

“This funding will allow our research team to answer fundamental questions regarding injury mechanisms that are specific to the military environment,” said principal investigator Stefan Duma, department head of the Virginia Tech — Wake Forest University School of Biomedical Engineering and Sciences. “By combining the excellent faculty and capabilities at Virginia Tech and Wake Forest University, we were able to successfully compete for this funding. The Virginia Tech Transportation Institute provided the talent and resources to integrate these programs and succeed in a highly competitive funding arena.”

Specifically, this grant will examine blast-induced brain trauma and mechanisms to reduce the risk of injury to the eyes and facial bones. Research will also be conducted to examine the dynamic loading of the neck and thorax as a result of vehicle-restraint systems.

The cumulative Department of Defense award to the Virginia Tech Transportation Institute and Center for Injury Biomechanics for all three phases of this project is $9.1 million. Much of the research for Phase 3 will be performed at the center’s crash sled laboratory located in the Virginia Tech Corporate Research Center in Blacksburg. This laboratory opened in 2009 through a new partnership between the center and the transportation institute.

Improving safety in sports

The Virginia Tech – Wake Forest University School of Biomedical Engineering and Sciences has also conducted pioneering work in measuring head im-
pacts suffered on the football field and in vehicle crashes. In May 2011, Duma and the center released the first-ever star-rating system for adult football helmets based on a new evaluation methodology that incorporated eight years of data and analysis, quantifying head impact exposure and risk of concussion. “Our goal was to develop a thorough test matrix that would provide consumers with valuable biomechanical data in order to make educated decisions about which helmet to purchase,” said Duma.

For their overall work on impact biomechanics, the Brain Trauma Foundation honored Duma and his colleagues in the Virginia Tech – Wake Forest University biomedical program, Steven Rowson and Joel D. Stitzel Jr., with its 2011 Brain Trauma Foundation Award.

“Virginia Tech’s work — done by the school’s engineering department with support from the football program and its coach, Frank Beamer — could be the opening act of a new era in which sports equipment is actively designed for injury reduction, while star-rating systems allow athletes and coaches to become smart consumers about what’s safest to wear,” said ESPN’s Gregg Easterbrook in a July 20, 2011, article he authored about Duma’s work.

In 2011-12, researchers at Tech also released the first-ever study that measures head impacts among youth football players. The head impact exposure for athletes involved in football at the college and high school levels has been well documented; however, the head impact exposure of the youth population had yet to be investigated, despite its dramatically larger population.

A total of 748 impacts were collected from seven 7- and 8-year-old players during the 2011 season. These measurements showed that although less frequent, youth football can produce high head accelerations that are similar to the range of concussion-causing impacts measured in adults, even during practices.

Based on the importance of the initial findings, the School of Biomedical Engineering and Sciences announced a new study to instrument and map the head impact exposure of youth football players ages 6 years through 18 years. The information will come from more than 240 instrumented helmets on six different football teams in Virginia and North Carolina.

**Working on improving vehicle injury outcomes**

Also in 2011-12, Toyota’s Collaborative Safety Research Center awarded two research awards to the biomedical program.

One of the new Toyota projects will focus on abdominal injuries. This study will look at the relationship between age and abdominal injuries caused by automobile crashes in the U.S. to determine if a specific population, such as senior drivers, is more vulnerable to abdominal injuries during these events.

The second project involving Virginia Tech is a partnership with George Washington University to upgrade a frontal-impact test dummy that offers automotive manufacturers an advanced tool to use during crash tests to assess the injury risk of drivers and passengers in vehicles.

In another area that has drawn more national attention lately, sleep research, the Arlington Innovation Center: Health Research, of Virginia Tech’s National Capital Region, was awarded a $1.5 million cooperative research and development agreement by the U.S. Army for neuroimaging studies of human performance. The agreement also includes an option for approximately $3 million of future work.

“Sleep, or lack of sleep, affects our physical and neurological performance,” said Seong K. Mun, professor of physics and director of the center. “The central scientific effort of this project will be to improve our understanding of how the

Stefan Duma, head of the Virginia Tech — Wake Forest University School of Biomedical Engineering and Sciences, is working to make football safer for youngsters by measuring head impacts in game and practice conditions.

"Sleep, or lack of sleep, affects our physical and neurological performance," said Seong K. Mun, professor of physics and director of the center. “The central scientific effort of this project will be to improve our understanding of how the
brain stem and thalamus regulate sleep in humans, and how these systems are affected by stress and sleep restriction."

Mun will work with Kenneth H. Wong, research assistant professor of physics; and Alpay Özcan, research assistant professor, both of whom are members of the center’s research team. Collaborators on the project are from Washington University in St. Louis and Gachon University in South Korea.

Mun said this area has received little attention in the past, largely because it lies deep within the brain in a region that is difficult to study. As a result, most of what is known comes from animals, which have different sleep patterns than humans.

A parallel goal for the project is to create a reference database and teaching files for the Army on advanced magnetic-resonance imaging (MRI) methods.

Centers help advance crucial research

One area garnering a lot of interest at Tech is drug research, with various projects funded at a total of $29 million spread around campus.

In late 2011-12, Tech established a Center for Drug Discovery to accelerate research that could lead to new treatments for cancer, Alzheimer’s disease, cardiovascular disease, atherosclerosis, diseases of the central nervous system, and parasitic diseases, such as malaria and Chagas disease.

University Distinguished Professor David Kingston is director. Principal participants — faculty members affiliated with the center — are those currently leading the university in the drug discovery and delivery area. They hail from the College of Science, College of Agriculture and Life Sciences, College of Natural Resources and Environment, College of Engineering, Virginia-Maryland Regional College of Veterinary Medicine, and Virginia Bioinformatics Institute.

The center is expected to become a major force in the United States, with the capacity to discover drug candidates and develop the drugs to the point that they will progress to Investigational New Drug status in the pharmaceutical industry.

As major pharmaceutical companies downsize and lay off discovery scientists, the role of universities in the field of drug discovery research is paramount, according to Kingston. “The changing landscape of drug discovery provides real opportunities for universities to make significant contributions to the process of drug discovery and delivery, provided that they can offer the intellectual, physical, and financial resources to capitalize on the situation,” said Kingston.

Maria Belen Cassera, assistant professor of biochemistry, said that the center will provide new resources for her metabolomics research. Cassera investigates the metabolic pathways used by the malaria-causing parasite *Plasmodium falciparum*, in order to develop more-effective drug treatments.

“The center is meant to bring everyone together under one umbrella,” Cassera said. “We each have different ideas, capabilities, and equipment, and there is great potential in increased collaboration.”

Center houses signature humanities program

Another collaboration, the Center for 21st Century Studies, features a nomadic international immersion experience at the heart of a yearlong course of study. The venture is a signature program in the College of Liberal Arts and Human Sciences.

The first cohort of students began together in an introductory course and then traveled to Morocco, Istanbul, and Sri Lanka over a five-week period, to engage in seminars, performances, home stays, and service learning, as well as research and creative scholarship projects. Drawing upon resources from the college’s operating and endowment funds, the center partially subsidizes the travel costs of the program for its participants in order to ensure broad participation.

The center’s curriculum is designed to allow students to become involved with emerging economic, political, and social structures with special attention to the issues of sustainability, justice, and cultural survival.

“We wanted to design the kind of program we wish we’d had access to as undergraduates, updated to 21st century issues and approaches,” said Robert Siegle, English professor and the center’s visionary and founding director. “It also meets the need to connect classroom
abstractions to real-world complexities, not to mention keeping in mind ethical values and sensitivity to the uniqueness of other cultures. We’re trying to produce the kinds of world leaders we’d like to see running things.”

Upon return from the summer study abroad experience, the students will spend the fall semester in a capstone course.

Focus on transportation initiatives

Another new center, this one funded by the National Science Foundation, is the Center for Tire Research, which will focus on developing new tire materials, as well as the manufacturing, modeling and simulation, and testing of tires.

The center is based at Virginia Tech’s Institute for Advanced Learning and Research in Danville, Va., and is directed by Saied Taheri, associate professor of mechanical engineering.

“Everything that tire manufacturers and car manufacturers do, anything they need to improve the performance of their cars or tires, as they relate to the tires, we will do,” said Taheri. “[The center] has the capability and goal to develop leading-edge polymer composite and nanomaterials and processes to improve the technical base that is needed by the tire companies to compete successfully in the global marketplace.”

The effort will be a true partnership, with numerous universities and tire and auto companies involved. All members will share any research findings, and the National Science Foundation will provide funding on an annual basis through at least 2017.

The Center for Tire Research is the second initiative by Virginia Tech that involves the tire industry. The National Tire Research Center focuses on independent testing, research, and assessments in conjunction with research and development performed by tire and auto manufacturers. Formed in 2010, it is located at the Virginia International Raceway.

In another transportation-related breakthrough for the university, the Research, and Innovative Technology Administration of the U.S. Department of Transportation awarded $3.5 million to establish a multidisciplinary program of transportation research, education, and technology transfer and to establish a Tier 1 University Transportation Center at the Virginia Tech Transportation Institute (VTTI). Additional external funding is expected to bring the total program at the institute to approximately $7 million through January 2014.

“It has been one of our long-term goals to become the lead university in a Tier 1 University Transportation Center,” said VTTI Director Tom Dingus. “We have been part of a consortium in the past, but leading the effort shows the strides we have made in becoming a national leader in transportation research.”

The University Transportation Center will focus on basic and applied research, education and workforce development, and technology transfer centered on what is perhaps the technical area with the greatest potential to make a significant impact on the future of transportation safety — the connected vehicle/infrastructure environment, which involves communication between vehicles, infrastructure, and devices.

“Transportation matters in everyone’s daily life. These research centers will help us solve the transportation challenges we face today and those that we know lay...”
ahead of us,” said U.S. Department of Transportation Secretary Ray LaHood.

Research across the spectrum

• **Aaron Schroeder**, an information integration and informatics research scientist at the Institute for Policy and Governance, a joint research center of Outreach and International Affairs and the College of Architecture and Urban Studies, will be the principal investigator on a $1.76 million project to build a data-integration system that will enable long-term analysis of kindergarten through 12th grade education, higher education, and workforce data across multiple state agencies in Virginia. The system will enable researchers and policymakers to access information about students’ progress over multiple decades, including during their education and their time in the workforce. The grant was awarded by the U.S. Department of Education.

• The National Institute of General Medical Sciences, part of the National Institutes of Health, renewed funding from its Models of Infectious Disease Agent Study (MIDAS) for a research project led by Professor **Stephen Eubank** at the Virginia Bioinformatics Institute. Infectious diseases pose one of the most significant threats to public health worldwide. MIDAS is a multi-university research partnership with a mandate to develop computational models or simulations to assist policymakers, public health workers, and other researchers in making better-informed decisions about natural or intentionally caused emerging infectious diseases, and in planning for national emergencies or acts of bioterrorism.

• An international research team led by **Boris Vinatzer**, an associate professor in the Department of Plant Pathology, Physiology, and Weed Science in the College of Agriculture and Life Sciences, and Giorgio Balestra, of the University of Tuscia in Italy, used the latest DNA-sequencing technology to trace a devastating pathogen back to its likely origin in China. Since 2008, *Pseudomonas syringae pv. actinidiae* (Psa) has been threatening the world’s kiwifruit industry and destroying orchards in Europe, South America, and New Zealand. In the four years since it was first reported in Italy, the “kiwifruit canker” disease caused by Psa has resulted in hundreds of millions of dollars in economic losses. “The first step in stopping the spread of aggressive bacteria like Psa is knowing where they come from and how they have spread,” Balestra said.

• Biochemist **Bob White**’s quest to understand the origin of life has been the hallmark of his almost 40-year career and is the driving force of a recent $1 million National Science Foundation grant. White, an associate professor of biochemistry and an affiliated faculty member with Fralin Life Science Institute, believes that clues lie in the study of protobiochemistry – the various chemistries that occurred in the ocean after the early Earth’s surface cooled and formed hot liquid oceans. White’s search led him to a present-day organism called *Methanocaldococcus jan-naschii*, or “MJ” for short. For the next four years, the NSF grant will fund the postdoctoral students, research fellows, graduate and undergraduate students, and upgraded equipment needed to continue White’s research.
VT KnowledgeWorks and the Business Technology Center, two Tech offices that help promote economic development by providing a range of services to technology-based businesses, joined forces to create a single, comprehensive entrepreneurship-assistance program.

“The merger will give us one brand name for business acceleration services that Virginia Tech provides to entrepreneurs and new ventures,” said Dick Daugherty, who had directed the Business Technology Center as a faculty member of the Pamplin College of Business and leads mentoring initiatives in his new role as director of strategic services at VT KnowledgeWorks. VT KnowledgeWorks continues to be led by Jim Flowers, who has served as its executive director since 2004.

The merged VT KnowledgeWorks launched an “in-reach” program, aimed at helping Virginia Tech inventors commercialize their discoveries in a more timely manner.

VT KnowledgeWorks also extended its services statewide, working through its Entrepreneurship Alliance, a network of regional partner centers. “We encourage and enable creative entrepreneurship worldwide, through supporting innovative curriculum development, local business resource centers, and a global network of cooperating regions,” said Flowers. “We focus on three essential contributors to success: clear understanding of fundamental business principles; access to timely, relevant information; and meaningful personal and corporate relationships.”

During its more than 15-year life, the Business Technology Center helped hundreds of emerging and evolving technology-based companies through key services that included market research and strategy development, competitive analysis, business plan development, and financial modeling. The center also provided students significant opportunities for experiential learning through working on projects with business owners and managers. These internships will be continue to be offered through VT KnowledgeWorks.

While outreach has always been an important part of the land-grant promise, members of the Virginia Tech community today are more engaged than ever in addressing the needs and problems of the state, region, and world.

Outreach and Engagement
Extension: Making valuable information more easily available

In 2011-12, for the first time Virginia Cooperative Extension provided publications in an e-book format, an easy, convenient, and environmentally friendly way to disseminate valuable and practical information. Free publications are available for iPads, iPhones, and the iPod touch, and were to be made available for other e-readers.

Extension publications posted on the Web received more than 4 million page views in 2011. Given the large volume of requests for publications, that number is expected to continue to rise. To meet that demand, Extension will release e-books every month that reflect the most well-read publications relevant to the respective season.

Extension specialists write hundreds of peer-reviewed publications every year, filled with content that addresses key issues in agriculture; finance; animals; home and family; community development; lawn and garden; the environment; and foods, nutrition, and health.

“The e-books reflect our commitment to reach larger and more diverse audiences,” said Ed Jones, director of Extension. “These e-books provide another valuable tool for putting knowledge into the hands of the people.”

Continuing a tradition of giving time and service

Annually, Virginia Tech students donate countless hours of service — but they’re also generous. In 2011-12, engineering students were chosen as the most philanthropic in the country and were recognized for operating the nation’s best Student Engineers’ Council, according to the results of an annual competition hosted by the National Association of Engineering Student Councils (NAESC) at Purdue University.

Among various accolades, the Student Engineers’ Council was cited for its allocation of more than $100,000 to the College of Engineering in the past year, as well as more than $1 million in the past 10 years. This money was used for various engineering projects, including partially funding more than 30 engineering organizations, such as the internationally award-winning hybrid electric vehicle team; the outdoor-terrain motorsport team; and the Baja and Formula Society of Automotive Engineers’ teams.

The council sponsors and organizes one of the largest engineering career fairs in the nation, attracting some 250 companies each year to the campus to recruit its engineering students. Each company pays a fee to attend the fair.

The council’s executive group then reviews proposals from engineering faculty and students on how to best spend the proceeds, while still making sure a portion is placed in the Virginia Tech Foundation endowment.

“The students who contribute their time and energy to the Virginia Tech Student Engineers’ Council, especially the executive team, are indeed the leaders of tomorrow,” said Lynn Nystrom, the council’s faculty advisor for more than 30 years. “They already represent the best and the brightest of our engineering students in the country, and their leadership and management skills are second to none.”

Activities undertaken by the council include underwriting of community service projects; planning of an outreach program to collect school supplies for low-income students from kindergarten through 12th grade; organization of a campus-wide Engineers’ Week celebration; development of an annual Leadership in Engineering conference; distribution of schedule planners to freshmen to help with their campus orientation; and the awarding of three annual scholarships, also from endowed accounts.

Engaging middle schoolers in science

The School of Education at Virginia Tech and the College of Education at University of Kentucky were awarded $1.3 million from the National Science Foundation to implement and evaluate an inquiry-based after-school program for middle school students in Appalachia, a project that combines, outreach, research and education. The three-year effort, entitled Studio STEM: Engaging Middle School Students in Networked Science and Engineering Projects, uses engineering design activities that integrate digital modeling, social media, and game-development tools to engage youth in investigating concepts and skills to integrate science, technology, engineering, and mathematics (STEM).

“We’ve taken technologies often used for leisure and applied them to education,” said Michael A. Evans, associate professor in the Department of Learning Sciences and Technologies in the College of Liberal Arts and Human Sciences, who serves as the principal investigator. “Our goal in Studio STEM is to prepare youth for the 21st century workplace, where these skills are essential.”

Studio STEM provides teacher workshops and opportunities for middle school youth at three schools to explore relationships between energy transfer and engineering design in a collaborative setting using computers and online data exchange. In the first session, for example, students were challenged to “Save the Penguins” by building energy-efficient dwellings for ice cube-shaped penguins. This exercise helps students to express their understanding of convection, radiation, and conduction.

“Studio STEM engages students in fun learning activities that involve important concepts without the pressure of standardized testing,” said Brett Jones, associate professor in the School of Education. “By collecting and analyzing real-
world data to test their ideas and solve problems, students get firsthand experiences in what it’s like to be a scientist and engineer.”

Career exploration is another major component of Studio STEM. The project partners with local engineering and technology businesses in southern Appalachia through the Roanoke-Blacksburg Technology Council and the Science Museum of Western Virginia to offer youth information about new, emerging careers.

Working internationally at home

There are abundant examples of Virginia Tech students, faculty members, and researchers providing help and information internationally, but in 2011-12, a team of Pamplin College of Business students made that help available here at home.

The students developed a website for women in Roanoke’s Sudanese refugee community to sell their handmade goods. The students — all business information technology majors in Professor Alan Abrahams’ Business Analysis Seminar in IT class — are Elon Daghigh, of Fairfax Station, Va.; Daniel Booth, of Blue Ridge, Va.; and Michelle Ching, of Fairfax, Va.

“Sewing is a way for the Roanoke Sudanese Women’s Group to come together to learn a new skill while practicing English,” the students wrote in their report. The women sell their goods — including bags, dolls, blankets, placemats, and garments — at community events to raise money and awareness. The proceeds support the Sudanese Peace Dancers, a youth group, and development projects in Sudan. “By selling their goods at community events, the women educate their neighbors about Sudan, South Sudan, and all refugees who live in the Roanoke Valley,” the students noted.

Community events, however, offered only a limited pool of customers, and the women wanted to expand their market by developing an e-commerce site. Through Dan Nemes, a project manager with AmeriCorps VISTA and coordinator with the Coalition for Refugee Resettlement Project at Virginia Tech’s Center for Student Engagement and Community Partnerships, the women were linked up with Abrahams’ students.

The completed website has received favorable feedback from Nemes and the Sudanese group members. “The website is striking,” said Nemes, adding that the women were all generally impressed with the site. “It was a pleasure to work with the students from Professor Abrahams’ class.”

The class projects, Abrahams said, allow students to apply software discussed in the course, which provides a comprehensive study of decision-support systems as managerial tools, particularly in an e-commerce environment. “The course emphasizes problem solving through integrating various quantitative techniques and practical application of e-business technology.”

Green Rating

Virginia Tech was named one of 16 colleges to The Princeton Review’s 2012 Green Rating Honor Roll. This means that Virginia Tech achieved the highest possible score in its Green Rating tallies, which not only helps the environment, but also attracts students.

Princeton Review noted the rising interest among students in attending green colleges. Among 8,200 college applicants surveyed this year for its annual College Hopes & Worries Survey, 69 percent said having information about a college’s commitment to the environment would impact their decision about applying to or attending a school.

“This is huge,” said Denny Cochrane, Virginia Tech’s sustainability program manager. “Just four years ago, the Office of Energy and Sustainability didn’t even exist, and the Climate Action Commitment wasn’t approved until just two years ago, and now we’re nationally recognized for our sustainability commitment.”

The Virginia Tech Climate Action Commitment clearly states the university’s vow to be a leader in campus sustainability.

“The Honor Roll includes schools that have been recognized nationally for years as being leaders in campus sustainability. It is such an honor to be included in those ranks,” said Cochrane.
Rankings

U.S. News & World Report

Undergraduate
- Virginia Tech ranked 28th among national public universities. Among all national universities, including such private institutions as Harvard and Yale, Tech ranked 71st.
- The College of Engineering ranked 15th in the nation (tied with Northwestern University and the University of Wisconsin-Madison) among all accredited engineering schools that offer doctorates. The program ranked seventh among engineering schools at public universities.
- The Pamplin College of Business undergraduate program ranked 46th among the nation’s undergraduate business programs and 26th among public institutions. Pamplin’s overall ranking places it in the top 10 percent of the more than 600 U.S. undergraduate programs accredited by the Association to Advance Collegiate Schools of Business International.

Other rankings
- The Princeton Review ranked Tech among the nation’s top 50 public universities in its “Best Value Colleges” for 2011. Princeton Review selected 50 public institutions and 50 private ones for its rankings. Kiplinger’s Personal Finance magazine also ranked Virginia Tech among the 100 public colleges and universities that offer a first-class educational experience at a bargain price.
- The university’s undergraduate architecture program in the College of Architecture and Urban Studies’ School of Architecture + Design was ranked third in the nation in the 13th annual America’s Best Architecture & Design Schools study conducted by the journal DesignIntelligence. The school’s undergraduate program in interior design was ranked 10th and the graduate landscape architecture program was ranked 12th.
- Dining Services was ranked No. 2 in the nation for Best Campus Food in 2011 by the Princeton Review.
- Virginia Tech, with an average starting salary of $51,600 for graduates, ranked fifth in the nation in that metric among NCAA Football Bowl Subdivision (FBS) schools, behind Stanford, Duke, Georgia Tech, and Notre Dame, according to the website Payscale.com. The Atlantic Coast Conference ranked first among all FBS conferences. Virginia Tech also ranked in the top 20 nationally for mid-career salaries of graduates of FBS schools.
- Tech’s apparel program was ranked 15th in the world by Fashion-Schools.org, based on the quality of programs offered, job and internship placements, industry reputation, teaching facilities, and tuition costs.

Graduate
- The College of Engineering’s overall graduate program ranked 24th among all schools of engineering. Four departments within the college finished in the top 10 of their respective categories.
- The career and technical education graduate program in the College of Liberal Arts and Human Sciences’ School of Education ranked fifth among vocational and technical specialties.
- The public affairs program in the School of Public and International Affairs, College of Architecture and Urban Studies, ranked 37th in the nation.
- Two programs within the College of Science were rated among the best in the nation. In the geosciences department, the paleontology program ranked ninth and the earth sciences program ranked 28th.
- The Pamplin College of Business ranked 37th among the nation’s part-time M.B.A. schools.

The Pylons atop the university’s War Memorial Chapel represent Virginia Tech’s eight core values — Brotherhood, Honor, Leadership, Sacrifice, Service, Loyalty, Duty, and Ut Prosim (That I May Serve). The names of all alumni killed in military service are engraved on the Pylons.
Alumni exemplify Ut Prosim

Service to the university by dedicated and loyal alumni is essential to fulfilling the land-grant promise. Every year Virginia Tech recognizes a few of the legions who give back to their alma mater in the true spirit of Ut Prosim (That I May Serve).

Samuel L. Lionberger Jr., of Roanoke, Va., received the William H. Ruffner Medal, the university’s highest honor. While a student, he was president of the Class of 1962 and was a member of various campus military organizations, as well as the Omicron Delta Kappa Leadership fraternity.

After earning his bachelor’s degree in building construction in 1962, Lionberger served in the U.S. Army Corps of Engineers, where he was awarded the Army Commendation Medal in 1964. Later that year, he returned to Roanoke and joined his family’s business, Lionberger Construction. He eventually became president of the company, and held the title of chief executive officer from 1975 until he retired in 2010. He currently runs Lionberger Consulting LLC, where he works as an owner’s representative on major construction projects, mediations, and arbitrations.

Lionberger’s participation in the university community includes serving on the Virginia Tech Foundation Board of Directors, the National Campaign Steering Committee of The Campaign for Virginia Tech: Invent the Future, the W.E. Skelton 4-H Educational Conference Center at Smith Mountain Lake Board of Trustees, the Virginia Tech alumni board, and the advisory boards of the College of Architecture and Urban Studies and the Myers-Lawson School of Construction.

Lionberger has also been active in his community, through service to the Roanoke Corps of the Salvation Army, the Military Family Support Center, and numerous other college and business boards. He was inducted in 2008, along with his wife, Lorinda, into the Southwest Virginia Business Hall of Fame.

Joseph R. Loring, of Arlington, Va., whose engineering firm is known for introducing efficient, reliable, environmentally friendly building systems, received the University Distinguished Achievement Award.

Loring earned his bachelor’s degree in electrical engineering from Virginia Tech in 1948. He was sent to Tech to study engineering after enlisting in the U.S. Army Reserves in 1944, but his studies were interrupted when he was assigned to work on a top-secret voice-scrambling installation at the Pentagon during World War II. He returned to Blacksburg after the war.

Loring started his own engineering firm — Joseph R. Loring & Associates Inc. — in 1956. Six years later, he was selected to design the electrical systems for the twin 110-story towers that comprised the World Trade Center.

Loring and his wife, Sheila Johnston, have funded a scholarship in his company’s name, as well as the Joseph R. Loring Professorship of Electrical and Computer Engineering. He has served on the Bradley Department of Electrical and Computer Engineering Advisory Board, the College of Engineering Advisory Board, and the college’s Committee of 100.

John R. Lawson II, of Newport News, Va., and Jean Arnold Dodge, of Mobile, Ala., received the Alumni Distinguished Service Award, presented by the Virginia Tech Alumni Association.

Lawson, who earned his bachelor’s degree in geophysics in 1975, is president and CEO of W.M. Jordan Co. He was a co-chair of The Campaign for Virginia Tech: Invent the Future.

Lawson began his career with W.M. Jordan Co. as a field engineer. Under his leadership, the company has become one of the largest general contractors in Virginia, with annual revenues of $500 million.

Along with leading the fundraising campaign, Lawson is a past rector of the Virginia Tech Board of Visitors, a member of the Virginia Tech Foundation Board of Directors, and a board member of the Myers-Lawson School of Construction, which bears his name in recognition of his foundational support for the school.

Dodge earned her bachelor’s degrees in sociology and political science in 1974 and was the university’s first female class president. She is land commissioner for Mobile County Probate Court, a past president of Virginia Tech’s Houston Alumni Chapter, and formerly served on the boards of directors for the university’s Alumni Association and Athletic Fund.
In addition to serving as class president, Dodge was selected as Virginia Tech’s Undergraduate Woman of the Year in 1974; served as Student Government Association president pro tempore; and was a member of Omicron Delta Kappa, Alpha Kappa Delta and the American Association of University Women. She went on to earn a law degree from the University of Virginia in 1977. Dodge is a past chair of the National Council of School Attorneys Advisory Board, and has served on the board of directors for the National School Boards Association. Dodge is also a member of Virginia Tech’s Gateway Society, the Alumni Association’s recognition society for former board members. As a former class president, she helped organize and plan Class of 1974 reunions.

**ICAT adds an “A” to STEM**

Virginia Tech has long been known for its work in science, technology, engineering, and mathematics (STEM), but during 2011-12 — with the Center for the Arts at Virginia Tech rising to become part of the skyline — the university has moved even more aggressively to combine the “arts” with STEM. From smart phones to automobiles, understanding the human genome to exploring social networks, scientific and technological innovation requires not just scientists and engineers, but artists and designers as well.

The Institute for Creativity, Arts, and Technology (ICAT), one of the seven Research Institutes of Virginia Tech, is the university-level center at that nexus. It’s a collection of collaborators coming together from various fields in a living laboratory that fosters creativity and promotes critical reflection, forging new connections between art and technology.

ICAT, of course, hasn’t moved into its home at the Center for the Arts yet (the center will be finished in 2013), but it already has five collaborative studios of faculty, students, industrial partners, and community volunteers working to create a unique environment for enacting change.

- **IDEAS** (Integrated Design + Education + Arts Studio) promotes development of critical and creative thinking skills in learners of all ages. Through collaborations with faculty and students at Tech and teachers in the region, IDEAS developed educational kits designed to facilitate critical and creative thinking. These kits are available free to all Virginia teachers.
- **IMAGE** reveals science through the arts and forges frontiers of computation and interaction for entertainment, training, and learning. This studio looks, for instance, at how the visual effects tools of Hollywood can help us better understand the molecular machines in our own bodies or how can the world of big data be converted into a more understandable world of sight and sound.
- **IMPACT** aims to change our understanding of human mind and body through the exploration of emerging interactive technologies, creativity, integrative health, and their synergistic impact on human well-being.
- **IMPLEMENT** is a studio that will be exploring the “paint brushes” of the future. What tools will we use to create and communicate in the 21st century?
- **INTERACT** studio develops and supports interdisciplinary research and curricular and action projects exploring the intersections of arts, culture, and community change. It recognizes the potential of art and culture to address challenges confronting communities.

R. Benjamin Knapp, senior lecturer and leader of the Music, Sensors, and Emotion research group at Queen’s University in Belfast, Northern Ireland, was named the founding director of ICAT in August 2011. “Creativity and critical thinking form the core of artistic endeavor, fundamental scientific discovery, and strategic development,” said Knapp.
### University Financial Highlights

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<th>Year</th>
<th>Operating revenues</th>
<th>Operating expenses</th>
<th>Operating loss (2)</th>
<th>Net increase (decrease) in net assets</th>
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(1) The university adopted the new Governmental Accounting Standard Board (GASB) reporting model in fiscal year 2002 as required by GASB Statement Number 35, Basic Financial Statement — and Management’s Discussion and Analysis — for Public Colleges and Universities.

(2) The university will always be expected to show an operating loss since significant recurring revenues are shown as non-operating. Major revenue sources reported as non-operating include state appropriations, gifts, and investment income. These revenue sources are used for general operations in support of the learning, discovery, and engagement missions of the university.

(3) Total research expenditures reported to the National Science Foundation were not available at publication date.

(4) Amounts for fiscal years 2008 and 2009 reflect any applicable restatements

(5) Grants, scholarships, and waivers for FY2010 and FY2011 include undergraduate Virginia residents who received ARRA tuition mitigation grants.

### Student Financial Aid (4)

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<th>Type of Financial Aid</th>
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<td>12,896</td>
<td>13,133</td>
<td>13,081</td>
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<tr>
<td>Grants, scholarships, and waivers</td>
<td>17,635</td>
<td>18,406</td>
<td>27,134</td>
<td>27,469</td>
<td>19,535</td>
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<td>8,836</td>
<td>8,734</td>
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<tr>
<td>Total amounts by major category</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Loans</td>
<td>106.1</td>
<td>128.0</td>
<td>139.9</td>
<td>147.0</td>
<td>157.2</td>
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<tr>
<td>Grants, scholarships, and waivers</td>
<td>119.2</td>
<td>134.2</td>
<td>155.7</td>
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<td>Employment opportunities</td>
<td>60.2</td>
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<td>69.5</td>
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<tr>
<td>Total financial aid</td>
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<td>$324.2</td>
<td>$359.0</td>
<td>$390.7</td>
<td>$413.8</td>
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(1) The university adopted the new Governmental Accounting Standard Board (GASB) reporting model in fiscal year 2002 as required by GASB Statement Number 35, Basic Financial Statement — and Management’s Discussion and Analysis — for Public Colleges and Universities.

(2) The university will always be expected to show an operating loss since significant recurring revenues are shown as non-operating. Major revenue sources reported as non-operating include state appropriations, gifts, and investment income. These revenue sources are used for general operations in support of the learning, discovery, and engagement missions of the university.

(3) Total research expenditures reported to the National Science Foundation were not available at publication date.

(4) Amounts for fiscal years 2008 and 2009 reflect any applicable restatements

(5) Grants, scholarships, and waivers for FY2010 and FY2011 include undergraduate Virginia residents who received ARRA tuition mitigation grants.
**JULY**

**Wonderland dinner wins prize**

Dining Services wins a grand-prize Loyal E. Horton award and a gold medal in the Residential Dining Special Event category from the National Association of College and University Food Services for its Alice in Wonderland dinner. The Loyal E. Horton awards contest is a highly competitive and prestigious peer-recognition program. Virginia Tech holds nearly 40 special dining events throughout the school year to add interesting and educational experiences to the regular dining schedule.

**Schurig takes association helm**

Dr. Gerhardt Schurig, dean of the Virginia-Maryland Regional College of Veterinary Medicine, assumes presidency of the Association of American Veterinary Medical Colleges. Schurig, the third dean in the history of the veterinary college, is leading an ongoing expansion of the college’s main campus in Blacksburg. In addition to serving as dean, Schurig is a professor and veterinary immunologist in the Department of Biomedical Sciences and Pathobiology and is internationally renowned for his work in developing the strain RB-51 vaccine against bovine brucellosis.

**Visitor center improves introduction to campus**

After four years of planning and 18 months of construction, the university opens the new Visitor and Undergraduate Admissions Center, a two-story, 18,155-square-foot building clad in traditional Hokie Stone next to the Inn at Virginia Tech and Skelton Conference Center. The visitor center section replaces a small house on Southgate Drive. University Relations teams spent more than a year working to immerse prospective students and all visitors in the Virginia Tech brand. With the help of a professional design firm, they put together exhibits that create innovative, interactive, and emotional experiences to forge personal connections with visitors, particularly prospective students.

**Public health center gears up**

The Institute for Society, Culture, and Environment announces the formation of the Center for Public Health Practice and Research in response to the increase in health-related research across campus and the new master of public health program. The mission of the center is to foster interdisciplinary, collaborative public health practice and research activities at Virginia Tech and among external public health agencies, organizations, practitioners, and researchers. The center is housed in the Department of Population Health Sciences in the Virginia-Maryland Regional College of Veterinary Medicine.

**AUGUST**

**Arts institute director named**

R. Benjamin Knapp, senior lecturer and leader of the Music, Sensors, and Emotion research group at Queen’s University in Belfast, Northern Ireland, is named founding director of the Institute for Creativity, Arts, and Technology at the Center for the Arts at Virginia Tech. Knapp also has a joint appointment as professor in the Department of Computer Science.

**SEPTEMBER**

**Movie tour comes to campus**

A bold request and a determined social media blitz by two Virginia Tech faculty members convince Hollywood’s Martin Sheen and Emilio Estevez to bring their new movie, “The Way,” to the university. Annie Hesp, an instructor in the Department of Foreign Languages and Literatures, initiated an in-person plea at a conference, and an intense campaign on Facebook and a YouTube clip posted by John Boyer, an instructor in the Department of Geography, persuade the two to come to Blacksburg.
Pete Dye course moves up in rankings
The Pete Dye River Course of Virginia Tech, the home of the university's golf team, is ranked ninth in Golfweek's 2011 Best Campus Courses list. The River Course is the survey's fastest riser, moving up nine spots from 18th in the 2010 best campus course list.

Former engineering dean dies
Hassan Aref, a former dean of the College of Engineering who held a chaired professorship, passes away. “He was passionately dedicated to advancing the College of Engineering, and the college did well during his tenure as dean,” says Paul Torgersen, president emeritus of Virginia Tech. Coming from the University of Illinois at Urbana-Champaign, Aref arrived at Tech as dean on April 1, 2003. Aref led the university in its efforts in 2003 to develop its supercomputer, System X, and he also suggested to the Division of Engineering Fundamentals that the faculty transition the division into the Department of Engineering Education, which became a groundbreaking degree program.

Sustainability ranking rises
Virginia Tech achieves a Silver Rating from the Association for the Advancement of Sustainability in Higher Education for sustainability performance in the Sustainability Tracking, Assessment, and Rating System (STARS) Program. The university’s overall score of 61.94 is approximately three points short of the Gold Rating. The STARS Program provides a common standard of measurement for 135 separate sustainability topics.

ACC expands again
The Atlantic Coast Conference invites the University of Pittsburgh and Syracuse University to join the conference, bringing membership to 14 schools.

OCTOBER

Students eating local fresh produce
The university’s Dining Services Garden at Kentland Farm, which provides a wide range of organically grown produce for several of the university’s dining venues, announces it expects to bring in a yield of 40,000 pounds for the 2011 harvest year, up from 23,000 pounds in 2010. The garden began as an herb plot in 2009, and then grew to three acres in 2011.

Dooley will take helm of foundation
The university announces that long-time university business executive Ray Smoot will retire from the Virginia Tech Foundation (see story elsewhere in this report). The university says that John Dooley, vice president for Outreach and International Affairs, will become the foundation’s chief operating officer on April 1, 2012, and then chief executive officer upon Smoot’s retirement in July 2012. “We have a seasoned administrator in John with strong command of the higher-education landscape, community relations, and understanding of the foundation’s role in advancing the university,” says President Charles W. Steger.

Tech recognizes plant and bug pioneer
Virginia Tech dedicates the large bur oak on the Drillfield in front of Burruss Hall in honor of William Bradford Alwood, a former Virginia Tech faculty member (1888-1904) and internationally known scientist, who planted the tree sometime after 1895. Alwood was a force in establishing the Virginia Agricultural Experiment Station and he founded the Virginia State Horticultural Society in 1897 in an effort to save the Virginia fruit industry from an invasive insect pest. The Department of Entomology also hosts the first Hokie Bugfest to promote entomology in honor of Alwood.

November

Alumnus wins big on Jeopardy!
Roger Craig, a 1999 College of Science graduate with bachelor’s degrees in biological sciences and biochemistry, wins the “Jeopardy! Tournament of Champions.” Craig walks away with a prize of $250,000 after beating 14 other top “Jeopardy!” champions. Craig, who also holds a Ph.D. in computer and information sciences from the University of Delaware, credits both of his alma maters for helping him win. To prepare for the tournament, Craig created a computer program custom-built to study more than 200,000 past “Jeopardy!” questions and answers and identify patterns.

Economic development gets grant boost
Because of its track record in activities that help create jobs, the Office of Economic Development at Tech is chosen to receive $500,000 in federal money over five years to further its regional economic development efforts. The U.S. Commerce Department’s Economic Development Administration chose fewer than two-dozen universities to receive the competitive University Center grants. The office will focus on helping companies pursue research commercialization and communities to better train their workforces. Virginia Tech’s annual economic impact in Virginia is $1.6 billion.

Administrative costs lower than average
An internal analysis prepared for the Virginia Tech Board of Visitors shows that the university’s administrative costs are below average compared to peer institutions, other Virginia schools, or national research universities. The study evaluates administrative cost as a percentage of “core” expenditures, administrative costs per student full-time equivalent (FTE), and administrative staffing levels per student FTE. With 13 percent of core expenditures devoted to administrative costs, Virginia Tech compares favorably to other Virginia schools’ average of 22 percent. Peer universities and research institutions devote 15.5 percent of core expenditures to administration.

December

Biosciences Precinct construction underway
The university breaks ground on the first building in the Biosciences Precinct at the corner of Duck Pond Drive and Washington
Street. The building will provide 93,860 square feet of research facilities for the biological systems engineering and food science and technology departments, including open-plan laboratories, pilot plant research space, a sensory/flavor-testing suite with individualized test panels, and prep kitchens. The Biosciences Precinct will support the College of Agriculture and Life Sciences, and when completed, will consist of four laboratory buildings with more than 400,000 square feet of space.

**Communications system to get updating**

The university announces a five-year, $8 million agreement with IBM’s Global Technology Services group to build and implement the new Virginia Tech Unified Communications system, which will merge the university’s campus-wide telephone network with its existing high-speed data network. This replacement for the existing 25-year-old telephone network will result in a much-improved, easier-to-use, and more-reliable communications environment for the campus community.

**Davidson Hall seeing needed modernization**

Demolition of the majority of Davidson Hall begins in the first phase of a $31.1 million, two-year renovation that will provide 45,000 square feet of modern lab space and a new lecture hall that will seat 300 people. A second phase has been proposed for renovation of the front part of the building. Dating to the 1930s, the hall bears the name of Robert James Davidson, a chemistry professor, dean of the Department of Applied Science, and a chemist for the Agricultural Experiment Station.

**JANUARY**

**ICTAS earns gold for being green**

The Institute for Critical Technology and Applied Science (ICTAS) earns a Leadership in Energy and Environmental Design Gold certification for its ICTAS II building. The certification by the U.S. Green Building Council, verified by the Green Building Certification Institute, is the nation’s preeminent program for the design, construction, and operation of high-performance green buildings. This is the university’s first research building to achieve gold certification and the second building on campus to attain that level.

**Committee looks at Stadium Woods facility**

The university appoints a study committee to evaluate the proposed site for the new indoor athletic practice facility after members of the community express concerns about the possible removal of part of old-growth woods near Lane Stadium. The committee, which, among other things, evaluates the ecological and educational significance of the wooded area, later recommends that the practice facility be moved a short distance from the proposed site.

**FEBRUARY**

**First Hokie Stone laid for Vet Med expansion**

Dr. Gerhardt Schurig, dean of the Virginia-Maryland Regional College of Veterinary Medicine, joins construction crews to place Hokie Stone in the façade for the new Veterinary Medicine Instruction Addition, the first Hokie Stone ever at the vet med school. Approximately 176 tons of Hokie Stone will cover about 2,000 square feet along the front of the addition. Upon completion, this building’s entrance will become the main entrance to the veterinary college.

**Wood science department updates name and mission**

The wood science and forest products department in the College of Natural Resources and Environment changes its name to the Department of Sustainable Biomaterials to more accurately reflect the scope of education and research being done in the department. The shift also aligns with the college’s transition in recent years toward an increased emphasis on sustainability and the environment. In recent years, faculty expertise has diversified to include education and research in nanomaterials, drug delivery, adhesion science, advanced composites, nontimber forest products, biofuels, aseptic packaging, and sustainable biomaterials.

**Niles agrees to take interim spot**

Jerome “Jerry” Niles, dean emeritus of Tech’s College of Liberal Arts and Human Sciences, is named interim vice president for Outreach and International Affairs to succeed John Dooley after Dooley becomes chief operating officer of the Virginia Tech Foundation on April 1, 2012.

**MARCH**

**BOV remembers 12th president**

The new academic and student affairs building on Old Turner Street is renamed Lavery Hall in honor of the university’s 12th president, William E. Lavery, who died in 2009. Lavery is credited with alleviating classroom, laboratory, and office space shortages; introducing a university core curriculum; expanding library holdings and degree programs; and attracting an undergraduate population with increasing academic standards. Other notable achievements during Lavery’s tenure as president from January 1975 through December 1987 include the establishment of the Virginia Tech Corporate Research Center and the Virginia-Maryland Regional College of Veterinary Medicine.

**Sorensen announces retirement plans**

After serving the Pamplin College of Business for more than 30 years, Dean Richard E. Sorensen announces he will retire in July 2013. Before being appointed dean and professor of management science (now business information technology) in July 1982, Sorensen led Appalachian State University’s business school for nine years. Under his leadership, the Pamplin College expanded student enrollments and academic programs; developed new international, leadership, ethics, and diversity programs; created...
new advising and career services for students and outreach services for businesses; and completed two major fundraising campaigns that exceeded their goals.

**Ice hockey club makes it to nationals**
Virginia Tech’s club ice hockey team competes in the American Collegiate Hockey Association (ACHA) Division II National Championship Tournament for the first time ever. The Hokies are one of just 16 teams vying for the title. Earning a spot in the national tournament is what motivated the team to leave the Atlantic Coast Collegiate Hockey League two years ago for the more competitive Mid-Atlantic Collegiate Hockey Association. To reach the ACHA national tournament, Tech beat in-state rival Liberty University, 5-3, in the Southeast Regional final.

**Commuter program earns award again**
The Best Workplaces for Commuters, a program managed by the National Center for Transit Research, again recognizes Virginia Tech among 15 employers nationwide with a “Race to Excellence” award. The award program recognizes organizations that have taken exemplary steps to offer transportation options, such as vanpool and transit benefits, or telework and compressed workweeks for their employees. This is the third consecutive year Virginia Tech has been recognized with this distinction.

**APRIL**

**Davidson dean takes over in student affairs**
Patricia A. “Patty” Perillo, associate dean of students at Davidson College, is named vice president for student affairs at Tech. Perillo succeeds Edward F.D. Spencer, who retires after 30 years at the university. Perillo will provide leadership and oversight to the 15 departments in the Division of Student Affairs. She brings 25 years of higher-education experience to Blacksburg. At Davidson, Perillo oversees the college’s residence life, Greek life, and multicultural affairs programs, as well as the maintenance and renovations of 29 campus buildings.

**Tech takes tree title for fourth time**
For the fourth consecutive year, Tech is named a Tree Campus USA by the Arbor Day Foundation in recognition of the university’s commitment to effective community forestry management. The university is the only institution of higher education in Virginia so recognized. It achieves the designation by meeting five core standards for sustainable campus forestry: a tree advisory committee, a campus tree-care plan, dedicated annual expenditures for its campus tree program, an Arbor Day observance, and the sponsorship of student service-learning projects.

**University’s Web presence expands**
Virginia Tech ranks 19th among all American universities based on how often people mentioned it on the Web, according to TrendK覆er MediaBuzz. The annual survey, which measures the Internet popularity of more than 400 colleges and universities, is compiled by Global Language Monitor, a research firm that rates brand equity. Virginia Tech rises 18 places from the previous year — the biggest gain of any institution in the top 25.

**MAY**

**Research breaks $450 million mark**
The university reports that its research expenditures for fiscal year 2011, which ended June 30, 2011, rose to $450 million, a 13.03 percent increase from the $398 million reported in fiscal year 2010. The increase represents the largest dollar growth and the second-largest percentage rise during the past nine years. In addition, the Research Division reports that Virginia Tech’s National Science Foundation research expenditure ranking for 2010 fell from 44th in 2009 to 47th. Rankings for expenditures typically lag a year behind reporting of the expenditures, so the ranking for 2011 is not yet known.

**Michelle Obama speaks at graduation**
First lady Michelle Obama speaks at commencement, joining U.S. Sen. Mark Warner in addressing nearly 4,500 undergraduates. Commencement rarely features two speakers. Also, for the first time ever, the university offers live streaming video of both the Graduate School Commencement and University Commencement ceremonies from the university homepage.

**JUNE**

**Polymer scientists descend on university**
Virginia Tech and the Macromolecules and Interfaces Institute host the World Polymer Congress, bringing thousands of renowned scientists, including a Nobel Prize winner, to Blacksburg. More than 1,200 polymer experts will give oral presentations and/or present posters on their research. The congress also provides an economic boost to the Blacksburg area of more than $2 million.

**School of Medicine closer to accreditation**
The Virginia Tech Carilion School of Medicine comes one step closer to full accreditation when the Liaison Committee on Medical Education (LCME) grants it provisional accreditation, the third of four stages in the process. The school will be eligible for full accreditation after graduating its first class in the spring of 2014.

**Tech recognizes entrepreneurs**
The Virginia Tech Faculty Entrepreneur Hall of Fame inducts its first class of honorees in a ceremony held during the 20th Virginia Tech Corporate Research Center annual banquet. From a pool of more than 50 nominees solicited from across the campus, six university faculty members are selected: Vinod Chachra, Richard Claus, Fred C. Lee, Arvid Myklebust, James Rancourt, and Tracy Wilkins.
Senior Administrative Personnel

President
Charles W. Steger

Senior Vice President and Provost
Mark G. McNamee

Vice President for Alumni Relations
Thomas C. Tillar

Vice President for Finance and Chief Financial Officer
M. Dwight Shelton Jr.

Vice President for Administrative Services
Sherwood G. Wilson

Vice President for Development and University Relations
Elizabeth A. Flanagan

Vice President for Information Technology
Earving L. Blythe

Vice President for Diversity and Inclusion
William T. Lewis Sr.

Vice President for Research
Robert Walters

Vice President for Student Affairs
Edward F.D. Spencer

Vice President and Executive Director for the National Capital Region
James R. Bohland (through Dec. 31, 2011)
Donald J. Leo (starting Jan. 1, 2012)

Vice President and Dean for Undergraduate Education
Daniel A. Wubah

Vice President for Outreach and International Affairs
John E. Dooley (through March 31, 2012)
Jerome Niles (interim, starting April 1, 2012)

Vice President and Dean for Graduate Education
Karen P. DePauw

University Treasurer and Chief Executive Officer for the Virginia Tech Foundation
Raymond J. Smoot

Chief Operating Officer for the Virginia Tech Foundation
John E. Dooley (starting April 1, 2012)

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