Research expenditures show second double-digit increase

By Susan Trulove

Research expenditure growth at Virginia Tech grew 12.3 percent to $216.3 million for fiscal year (FY) 2001, the university Controller’s Office reported to the National Science Foundation (NSF).

Len Peters, vice provost for research, said, “This is the second year that the increase has been greater than 10 percent, and the current year is off to an outstanding start as well.” (Editor’s note: See accompanying article on page 3)

In FY 2000, Virginia Tech reported total research and development expenditures of $192.6 million for the NSF survey of colleges and universities nation-wide—a 14 percent increase from the previous year. Also in FY 2000, Virginia Tech’s dollar increase in research expenditures was the twelfth highest increase among the top 50 universities, Peters said. “The difference in dollars between Virginia Tech and six of the nine universities in the 41 to 50 rankings ahead of us was reduced.”

The university learned in December that its ranking for FY 2000 had moved from 50 to 51 as a result of the University of Maryland at Baltimore surging ahead by nearly 60 percent from 71st to 44th.

A review of that university’s web site shows significant National Institutes of Health, pharmaceutical company, and other medical research sponsorship in the last two years. The University of Maryland at Baltimore also began a major faculty recruitment program sponsored by that university in the early 1990s.

Peters reported that sponsored-research growth at Virginia Tech in the first six months of the current fiscal year (July 1 to Dec. 30, 2001) is up almost 50 percent. Sponsored research is a portion of research expenditures.

Expenditures include research sponsored by state and federal agencies, private foundations, and industry, as well as institutional investment in research, both direct and indirect. Indirect investment includes equipment and utilities, for example. The fiscal year ends June 30. It takes until the end of December for NSF rankings of the previous fiscal year’s expenditures to be made available because almost 600 colleges and universities are included in the survey.

Virginia Tech can look forward to increased expenditures based on the increased awards in 2001, Peters said. “Although, of course, other universities are also within striking distance of the top 50. The competition is fierce among the top 100 of the 589 institutions ranked, often with only a few hundred thousand dollars difference out of hundreds of millions of dollars of expenditures representing the difference in ranking between two institutions.”

President Charles Steger has challenged the university to achieve top-30 status by 2010. The higher ranking will provide resources for teaching programs as well as research that will improve the quality of life in the state and the nation, Peters said.

“Prospects for the university to achieve the top-30 goal remain good, our growth in research funding has more than met our expectations,” Peters said. “Faculty members are doing their best.”

(See RESEARCH on 4)

Interior-design program ranked eleventh nationally

By Jean Elliott

Virginia Tech’s Department of Near Environments in the College of Human Resources and Education jumped up two places from last year’s ranking of interior-design-education programs.

DesignIntelligence, the industry newsletter, now recognizes Virginia Tech’s program as the eleventh-best in the nation.

DesignIntelligence conducts a comprehensive study of the nation’s top interior-design firms to determine their annual ranking of colleges and universities. The results of the 2001 study have also been published in the newly released Almanac of Architecture & Design. TM Edition.

This study is the industry’s only “customer-satisfaction”-oriented ranking of interior-design degree programs. Principals, interior-design directors, and human-resources directors from over 300 leading U.S. interior-design firms were asked to name from which accredited schools they have had the best experience hiring employees relative to the past 10 years. The Foundation for Interior Design Education Research (FIDER) accredits the various programs.

This year’s survey also gathered information on recruiting practices, the skills of recent interior-design graduates, and their starting salaries. Firms in each market sector and throughout all regions of the country were contacted. The results provide the best overview of the reputation of each school within the practicing interior-design community.

“The faculty members in our interior design program are a very cohesive group of professionals who thoughtfully address issues of programming and curricula,” said LuAnn Gaskill, department head of near environments.

“They have integrated international education, diversity of learning experiences, and design-oriented technologies into the educational environment. Our students benefit with opportunities to engage in creative thinking and problem-solving techniques in the design of functional and aesthetic interior environments.”

“There are approximately 500 interior-design programs in the nation, and we are proud that Virginia Tech has climbed from thirteenth to eleventh,” said interior-design professor Joan McLain-Kark. “It is particularly satisfying to know that the leading, award-winning firms, including industry giants and top sector leaders, think so highly of our graduates.”

(See WATFORD on 4)

Police Department adds K-9 unit

By Tatiana Arau

University Relations intern

The Virginia Tech Police Department has welcomed a new four-legged member to its force. Hokie, a two-year-old German Shepherd, will be a part of the police department’s first K-9 unit.

Last year, officers in the Virginia Tech Police Department were asked to volunteer to be a part of this program. After reviewing many applications, Officer Keith Weaver was selected to partner with Hokie. Weaver was chosen in part, because of his willingness to dedicate time and effort to bond and train with Hokie. Training is a continual process which is essential for the dog and his handler to function as a team. It also serves to ensure that the team will be operating at optimum efficiency.

Acquiring Hokie is part of Police Chief Debra Duncan’s new initiatives for the Police Department. These initiatives focus on proactive, as opposed to reactive, community policing. The police department views Hokie’s role in the community as an important one.

“Hokie will serve as a good form of interaction with the community because people are more likely to approach an officer with a friendly dog,” Lt. Deborah Morgan said.

In addition, Hokie will be trained to perform many tasks for the police department. “Hokie will be trained for everything from narcotics to searches,” said Morgan. “He is a multi-purpose dog.”

Weaver and Hokie began a 12-week training program at a Police K-9 Training School in Rountree on February 4.

Equal Opportunity, Diversity Commission proposed

By Clara B. Cox

Working together for the past five months, the University Committee on Equal Opportunity and Affirmative Action and the Advisory Council on Diversity and Multicultural Affairs have drafted a resolution to amend the University Council constitution and by-laws to establish a Commission on Equal Opportunity and Diversity.

The university community can learn more about the commission at an open session at noon on February 20 in 150 Squires Student Center. Representatives of the two sponsoring units will be on hand to answer questions.

(See EQUAL OPPORTUNITY on 3)
New limited-submission programs announced

The Research Division has announced three limited submission programs on its February 1 Opportunity Update site.

The sites are the American Honda Foundation Grants in Youth and Scientific Education, with an internal deadline of March 13; the NIH Curriculum Development Award in Neuroinformatics Research and Analysis, due March 14; and the Pfeiffer Foundation Grants-in-Aid in medicine and pharmacy, due June 13.

More information is available at www.research.vt.edu/research/limitsubs/.

February 28 is the internal deadline for the Burroughs Wellcome Fund Career Award “at the Scientific Interface: Bridging Support for Physical / Computational Scientists Entering Biology.”

Other opportunities being announced at www.rgs.vt.edu/funding/ are still available on the OU.

New faculty award available

The January 18 Opportunity Update (www.rgs.vt.edu/funding/ou/update.html) contains information on an early career award—the Camille and Henry Dreyfus New Faculty Awards Program for faculty members in the chemical sciences. The internal letter of intent is due in March.

There is a February 28 internal deadline for other limited-submission programs, previously announced. Details are still available on the OU.

The site is a service of the Research Division. E-mail lizacker@vt.edu for automatic notifications.

On-line bioterrorist course offered

By Cate Morey

In response to concerns of the public resulting from recent anthrax exposures, Virginia Tech is offering the on-line non-credit course, “The Threat of Bioterrorism.”

The course is available to anybody in the world with Internet access for $39 through http://vto.vt.edu. The course is delivered by Nisamulwar Stranathan, a veterinary microbiologist, teacher, researcher and diagnostician at the Virginia-Maryland Regional College of Veterinary Medicine. Virginia Tech alumni can take this course free of charge through the VTalumn.NET life-long learning gateway.

Various acts of terrorism, some in the form of biological agents, may now threaten society. The course may help put some fears to rest by providing an examination of anthrax as well many other biological agents which could be used as a bioterrorist threat.

A direct link to the course is located at http://www.vt.o.v.t.e.d/u/course.ll.php?id=DVMK016.

eDan program sparks regional interest

By Jeannie Garren

Virginia Tech’s eDan program in Southside Virginia garnered strong interest last week at the annual conference of the Southern Growth Policies Board in Atlanta.

The program, an effort by the Piedmont Foundation and Virginia Tech to accelerate high-speed Internet connectivity and economic development in Virginia’s Dan River Region, was featured in a presentation that Brenda Neidigh, the university’s eCorridors Program director, delivered to an audience of state governors, legislators, and other economic and community-development stakeholders from across the South.

In an invited presentation, “eCorridors Program: Creating Competitive Advantage for Rural Communities,” Neidigh told the audience that the Dan River region may be the first in the country to have an advanced computer-network architecture that includes community-based Multimedia Service Access Points (MSAP’s) and next-generation fiber optics in an inter-community link.

According to Neidigh, eCorridor routes—electronic highways carrying high-speed Internet traffic, such as the eDan infrastructure—envisioned for the Dan River region—are predicted to spark “transformational economic activity” in networked communities, much as interstate highways once brought new bustle to formerly isolated towns. “In the new global economy, a ‘networked economy’ relying increasingly on communications among networked computers, any community lacking the ability, at a reasonable cost, to provide high-volume information, products, and services to the world will have a severe competitive disadvantage,” she said.

Neidigh was part of a panel that was asked to discuss the impact of research universities on local economic development. “eDan, the pilot project of Virginia Tech’s state-wide eCorridors Program, is a good example of how Virginia Tech is partnering with communities interested in using technology to advance economic development. The eDan project is intended to be a proof-of-concept model for the eCorridors Program and is envisioned to serve as the prototype for a broader regional initiative known as the e58 Corridor, which is being funded in part by the Virginia Tobacco Indemnification and Revitalization Commission.”

FPMC to hold annual meeting

By Lynn Davis

The Center for Forest Products Marketing and Management in the College of Natural Resources will hold its annual meeting March 19 on campus. The meeting gives companies an opportunity to meet with faculty members and students who specialize in wood products.

The annual meeting will include a business meeting and dinner, and feature guest speaker George Barrett from the Weekly Hardwood Review. The business meeting will focus on an update of the center’s activities in 2001 and include open discussion regarding the direction of the center. The meeting is free to all members of the center, but non-members are also welcome. For more information, contact Joanne Buckner at 1-876 or crtfpmjnc@vt.edu.
**Employment**

**Faculty Positions**

**NON-INSTRUCTIONAL**

**Geological Sciences. Research Associate (re-advertised).** Contact: Patricia Dove, 4068 Derring (0420). Open until filled.

**University Development, Assistant/ Associate Director of Development, College of Engineering (re-advertised).** Contact: Susan Sink, 333 Norris (0259). Open until filled.

**OFF CAMPUS**

Director of Nursing, 002179M, PB 4, CVM.

**Geographic Data Developer, 007913M, PB 4, BSE. Radio Announcer, W00240S, PB 3, UR/WVTF Radio.**

**University’s sponsored research continues to grow**

By Susan Trulove

“The number of proposals and awards is any indicator faculty and research faculty members have responded to the challenge of becoming a top-30 research institution,” said Len Peters, vice provost for research. In fiscal year (FY) 2001, Sponsored Programs witnessed a record number of proposals—exceeding 2,500 for the first time and requesting funding in excess of a half billion dollars, according to David Richardson, director of sponsored programs. And in the first six months of FY 2002—Fuly through December 2001, sponsored-research activity again grew at a significant rate. “Researchers landed 1,108 awards for $83.1 million,” Richardson reported. Excess funds from awards—“Almost all legitimate administrative units increased,” Peters said.

He points out that increased research means increases in support for students, increased research opportunities for students at all levels, and results in new content for instructional programs.

“Virginia Tech maintains a very diversified pool of sponsors,” Richardson said. The federal government remains the source for the majority of awards. Over the last five years, support from the National Science Foundation, United States Department of Agriculture, and the Department of Health and Human Services have all increased more than 50 percent. During this same course of time, industrial sponsorship more than doubled.

FY 2002 sponsored activity in the instruction division increased from $1.8 million to $3.7 million, as a result of a large informatics development grant in the College of Veterinary Medicine. Public-service funding increased in the first six months of FY 2002 in the public-service division, largely due to activity in the College of Architecture and Urban Studies. Extension declined somewhat.

**Equal Opportunity**

**Continued from 1**

Questions and provide information. Written comments and questions can be sent via e-mail to equal opportu

“We want to open the door for input and feedback on this proposed resolution and hope the university community will take advantage of these opportunities. The commission would affect all of us—faculty, staff, and students—because of the role it could play in our governance structure and the attention it could give to such issues as campus climate and student, faculty, and staff recruitment and retention. Plus, the new commission would have the responsibility to monitor the implementation of the university’s Diversity Strategic Plan,” said Ben Dixon, vice president for multicultural affairs.

If approved, the new commission would work on policies and procedures relating to the university’s responsibilities for equal opportunity, affirmative action, accessibility, and compliance; diversity planning and evaluation; diversity training and education; assessment of institutional climate; and similar equity and diversity issues affecting the university.

The resolution also calls for the new commission to collaborate with other commissions and committees “to address issues of diversity and equity as they relate to recruitment, retention, and advancement of faculty, staff, and students, particularly those from historically under-represented groups; student life; academic policies and support; curriculum; research, scholarship, and creative activity; and outreach.”

To address these matters, the resolution states, “the commission will aggressively seek the concerns and opinions of interested bodies through various structures and activities.” The chair of the new commission, who would be elected from among its non-ex officio faculty and staff members, would be added to University Council membership, and the Equal Opportunity/Affirmative Action Committee would be deleted from the by-laws.

Ellen Plummer, chair of the EO/AA Committee and director of the Women’s Center, said that the Advisory Council on Multicultural Affairs and the EO/AA Committee “have increasingly had overlapping agendas and sets of concerns. Although these advisory bodies serve important and distinct purposes, they lack the authority to formulate or oversee policy. With our renewed commitment to equal opportunity and diversity issues, we felt that they should be elevated to the same level of importance as we grant other facets of university life.”

The new commission would comprise the commission, including the vice president of multicultural affairs or designee; director of Equal Opportunity/Affirmative Action Office or designee; assistant vice president for University Development; University Development Assistant/Associate Director of Development, College of Engineering (re-advertised); and a faculty, staff, or student member selected by the Council of Academic Deans; a faculty or staff representative from each of the eight colleges, nominated by the college diversity committees and selected by each college dean; a representative selected by the director of Cooperative Extension; a staff representative selected by the Staff Senate; a faculty or staff community representatives.

The college representatives would convene between faculty and staff members. The latter eight members would come from the communities of African-Americans, Asian-Americans, Hispanic-Latino-Americans, international faculty/staff members, faculty and staff members with disabilities, lesbian, gay, and bisexual persons; native Americans, and women.

Associate Provost Pat Hyer, who worked with the bodies that drafted the resolution, said that, historically, women and individuals of color were denied access and participation in the academic, social, and cultural life of Virginia Tech and that their lack of participation continues to have an effect on the campus climate. “That was one of the reasons we felt that a new commission was in order,” she said.

The proposed resolution calls for the new commission to become effective this fall, provided it is approved by University Council and the Board of Visitors.

The full resolution proposal can be viewed online by clicking on “Diversity” at http://www.provost.vt.edu/provost.html.

** Classified Positions**

The following classified positions are currently available. Position details, specific application procedures/position-closing dates may be found on Personnel Services web site http://www.ps.vt.edu. Positions are also listed on the Job Line, a 24-hour recorded message service. For information and job listings, call 1-5300. Some positions include state benefits. Positions with numbers beginning with “W” are hourly and do not include state benefits. Individuals with disabilities desiring assistance or accommodation in the application process should call by the application deadline. Closing date for advertised positions is 1 p.m. Monday. An EO/AA employer committed to diversity.

**Full Time**

Administrative Assistant, 001854F, PB 3, BFP.

Administrative Staff Assistant, 001771Y, PB 3, VP for Administration/Treasurer.

Assistant Manager, 001209H, PB 3, RDP.

Development Associate, 007880S, PB 3, University Development.

Event Services Office Manager, 001954J, PB 3, USA.

Fiscal Coordinator, 006544S, PB 3, University Relations.

One-time full-time food-service position available.

Laboratory Aide, 007915M, PB 1, Entomology.

Laboratory Technician, 002999M, PB 3, VTH.

Operations Manager, 001212H, PB 4, RDP.

Radiologic Technologist, 002394M, PB 3, VTH.

Sales/Marketing Manager, 000478H, PB 3, RDP.

Sous Chef, 007881H, PB 3, RDP.

Sous Chef, 000480H, PB 3, RDP.

**Part Time**

Animal Care Technician, W022563M, PB 1, VTH.

ICU Veterinary Technologist Large Animal, W022218M, PB 2, VTH.

Ipm Program Technician, W023371M, PB 3, Entomology.

Ipb Program Assistant, W023360M, PB 3, Biochemistry.

Laboratory Specialist, W023361M, PB 3, Biochemistry.

Radiologic Technologist, W022412M, PB 3, VTH.

Research Assistant, W023351M, PB 3, AAE.

Veterinary Technician, W023340M, PB 4, Veterinary Teaching Hospital.

**University Development/University Relations, Director of Special Events.** Contact: Margaret Zelinski, 315 Burruss (0253); Review begins Feb. 15.

**School of Medical Sciences.** Research Associate, String Theory. Contact: Djordje Minic, 123 Robeson (0435). Review begins April 1.

**Virginia Cooperative Extension. Extension Agent/Natural Resources.** Contact: Steve Umberger, 121 Hutcheson (0437); Review begins immediately.

**University Development/University Relations.** Assistant/Associate Director of Development, College of Engineering (re-advertised). Contact: Susan Sink, 333 Norris (0259). Open until filled.

**Fiscal Coordinator, 005445S, PB 3, University Relations.**

**Administrative Assistant, 001854F, PB 3, BFP.**

**Administrative Staff Assistant, 001771Y, PB 3, VP for Administration/Treasurer.**

**Assistant Manager, 001209H, PB 3, RDP.**

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**Virginia Tech**

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

FRIDAY, FEBRUARY 8, 2002 SPECTRUM 3
**Chemical from the controversial horseshoe crab vital to human health**  
*By Lynn Davis*

Over the past several years, management of the horseshoe-crab population has become increasingly controversial. Director of Virginia Tech’s new Horseshoe Crab Research Center (HCRC) Jim Berkson claims that the environmental controversy is three-pronged.

“Fishermen catch horseshoe crabs for use as bait in the lucrative eel and conch fishery,” he said. “Biomedical companies catch and bleed horseshoe crabs to produce a chemical (LAL) used to detect the presence of bacteria in injectable drugs and implantable devices. Environmentalists are concerned because migratory shorebirds depend on horseshoe-crab eggs to fuel their migration to their arctic breeding grounds each year. The battle over this ecological, economically, and medically essential species has become one of the most heated environmental issues on the east coast in recent years.”

To obtain data needed so officials will know how to manage such a vital resource, the College of Natural Resources expanded its horseshoe-crab research this year and built a new facility at its Aquaculture Center devoted to horseshoe-crab studies. Capable of holding more than 200 adult crabs, the Horseshoe Crab Research Center (HCRC) is the largest captive system in the nation dedicated to horseshoe crabs.

“We founded the center on the belief that developing effective management strategies requires an understanding of all three dimensions of the horseshoe-crab issue: fisheries, shorebirds, and biomedical companies,” Berkson said.

The HCRC combines faculty members, students, facilities, and expertise from Virginia Tech’s Department of Fisheries and Wildlife Sciences and Conservation Management Institute in the College of Natural Resources, Virginia-Maryland Regional College of Veterinary Medicine, and the new Virginia Bioinformatics Institute.

“When September 11 the center has received a lot of attention because of the work we’re doing with horseshoe crabs indirectly relating to counter-terrorism,” Berkson said.

The chemical that comes from the blood of horseshoe crabs, LAL, is used to test for the presence of endotoxins in injectable drugs and implantable devices. That means all vaccines, including the anthrax and smallpox vaccines, have to be tested using LAL to prevent any contamination, whether intentional or unintentional.

“The recent rush to produce sufficient anthrax and smallpox vaccine really shows how much we depend on LAL and the horseshoe crabs needed to produce it,” Berkson said. “At our new Horseshoe Crab Research Center we are working to develop alternative ways to produce LAL to ensure its on-going supply. This is extremely important because we still do not have the information we need to develop effective management regimes and the population of horseshoe crabs may be in a long term decline.”

Working in partnership with Virginia Tech are three federal agencies involved in horseshoe-crab research and management, state agencies responsible for horseshoe-crab management in Virginia, Delaware, and Maryland; biomedical companies, including BioWhittaker, the largest producer of the LAL chemical from the crabs; and environmental groups involved in the issue such as the Audubon Society.

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**General Electric representatives meet Tech students**  
*By Allyson Armistead*

General Electric (GE) representatives from around the nation, most of whom are Virginia Tech graduates, recently met 50 of Virginia Tech’s top engineering and business majors at a conference provided an opportunity early in the students’ careers to learn about the corporate culture and operating strategies of General Electric.

Through a series of activities such as building bridges out of paper products and participating in simulated real-world business situations, students learned to interact with diverse social styles. They learned how to lead a team by maximizing the strengths of everyone involved as well as how to delegate responsibility to produce a quality product in an efficient amount of time, a secret to GE’s success as one of the nation’s top industries.

The conference is coordinated by Tech graduate and GE executive Tim Wachenfeld, Wallace Allen, associate director for corporate and foundation relations at Virginia Tech, and COTA (Virginia Tech’s Center for Organization and Technological Advancement), the Student Leadership.

Over the years, this conference has been a stepping stone for many Virginia Tech students toward internships, co-op positions, and full-time employment with General Electric.

In his closing speech, Wachenfeld expressed GE’s commitment to continued investment in Virginia Tech and its students, both through the Annual Student Leadership Conference and the recent donation of $225,000 to the Faculty for the Future Program that focuses on motivating minority students in engineering to remain in school and pursue doctoral degrees.

### WATFORD

*Continued from 1*

the engineering college’s recruitment and retention rates for minority students.

Under Watford’s leadership, enrollment of African-American freshmen increased by 55 percent from 1990 to 2001, and the five-year graduation rate for African-American students increased from 30 percent in 1992 to 45 percent in 1996. Watford also has enacted recruitment and mentoring programs for women and Hispanic students that have been successful.

In 1994, the General Electric Foundation awarded a grant of $305,000 to Watford in recognition of the progress made by OMEP toward increasing the number of graduating minority engineers. The foundation has made two more grants totaling $375,000 to support the Virginia Tech-General Electric Fund Scholars Program.

In all, Watford has secured more than $1.5 million in funding and support for OMEP and other undergraduate programs from a variety of sources including the General Electric Foundation, Intel, the Sloan Foundation, Corning Foundation, Honeywell International, Ingersoll Rand, and Microsoft.

In 1996, Watford received Virginia Tech’s Affirmative Action Award for improving the campus environment for minority and women students, and she was featured in an article in *Woman Engineer* about how universities and companies offer support to women in engineering.

In 1997, Watford received the Charles A. Tunstall Outstanding MEP Award from the National Society for Black Engineers (NSBE) for her significant contributions to the success of African-American students at Virginia Tech, and she was selected as one of the 50 Top Minority Women in Science & Engineering by the National Technical Association.

Since accepting the position of associate dean in 1997—on condition that she could continue her work with OMEP—Watford has extended the mentoring programs that proved successful with minority students to additional populations of students.

Watford received her B.S. in mining engineering and her M.S. and Ph.D. in industrial and systems engineering, all from Virginia Tech. She taught at Clemson University before returning to her alma mater in 1992.