Restructuring efforts under way; more to follow

By Mercedes Meeks

In its effort to move into the ranks of America’s top-30 research institutions, the university has begun implementing the restructuring plan approved by the Board of Visitors in June.

Four departments became affiliated with new colleges on July 1. The Department of Art and Art History moved from the College of Arts and Sciences to the College of Architecture and Urban Studies. The Department of Communication Studies moved from the College of Arts and Sciences to the College of Human Resources and Education. And the Department of Hospitality and Tourism Management moved from the College of Human Resources and Education into the Pamplin College of Business.

The Design Consortium, established by the Colleges of Human Resources, Architecture and Urban Studies, and Arts and Sciences in 1994, has moved together under one umbrella college—Architecture and Urban Studies. The consortium consists of programs in apparel design, architecture, art and art history, interior design, landscape architecture, and theatre arts.

“Toward students we hope that the changes are relatively transparent,” said Joe Merola, senior administrative fellow for restructuring. “There are obviously many students who will report to a different dean for certain administrative issues, but beyond that the student’s interaction with the department should not change.”

Another restructuring activity, a new School of Biomedical Engineering and Sciences has been formed. “This school adds another dimension. Not only do you have departments from different colleges, which are formerly from the College of Engineering and the College of Veterinary Medicine, now Wake Forest University’s medical school is also a partner,” Merola said. “It is expected that this school will grow participation from many of the science departments.”

Changes in the College of Arts and Sciences are next on the horizon. The largest college within the university will become two new colleges. One will be a college of sciences, yet to be named; the other will be a college of arts.

(See RESTRUCTURING on 3)

Police ticketing careless pedestrians on campus

Improving pedestrian safety is and has always been a priority for the Virginia Tech Police Department (VTPD). In a policy instituted October 1, pedestrians will be ticketed for crossing any street on campus in a careless manner. A careless manner is defined as walking out into the street without looking, thereby causing cars to stop. The ticket will carry a $30 fine plus $47 in court costs. Officers will be posted at high-traffic areas such as Washington Street, around the Drillfield, Perry Street and in front of McBryde.

This decision is only a small part of the changes that have been made on campus in an effort to improve pedestrian safety after a student was struck by a car near Lee Hall on Washington Street in April.

The VTPD will be enforcing Code of Virginia laws (46.2-923 and 46.926) that deal with pedestrian offenses. The code states that “when crossing highways, pedestrians (See POLICE on 2)

Navy to use Tech’s remote-control excavator

By Anne Fowler

A team of Virginia Tech mechanical engineering (ME) students, working with Texas-based National Instruments Corp., the U.S. Navy and Case Construction Equipment, has developed a remote-control method for operating an excavator that will dig for ordnance at the Naval Surface Warfare Center in Dahlgren.

Thanks to the remote-control technique, a Navy operator will work from inside the safety of a shielded trailer 1,000 yards from the excavation site.

The students modified LabVIEW software developed by National Instruments to enable the excavator’s operator to manipulate the machine’s two dual-axis joystick controls via the Internet.

Meanwhile, the operator can observe

(See NAVY on 4)
Events

Friday, 4
- Last Day to Drop
- International Club Program, 5 to 6:30 p.m., Cranwell Center.

Saturday, 5
- VT Open House.
- Chamber Music, 8 p.m., Blacksburg Presbyterian Church.
- YMCA Hike, 9 a.m. YMCA parking lot.

Sunday, 6
- VT Open House.
- Ensemble Concert, 8 p.m., Squires Recital Salon.

Monday, 7
- University Council meets, 3 to 5 p.m., 1045 Pamplin.
- Faculty Development Workshop, 10 a.m. to noon, 1120 Torgersen.
- Faculty Development Workshop, 3 to 5 p.m., 1120 Torgersen.
- Faculty Development Workshop, 3 to 5 p.m., 3060 Torgersen.

Tuesday, 8
- Leadership Development Workshop, 9 a.m. to noon, DBHCC room C.
- Faculty Development Workshop, 10 a.m. to noon, 1120 Torgersen.
- Faculty Development Workshop, 3 to 5 p.m., 3060 Torgersen.

BULLETINS

MAP MURI to sponsor plenary lectures
The Macromolecular Architecture for Performance (MAP) Multidisciplinary University Research Initiative (MURI) will sponsor a session of three plenary lectures from 3 to 6:30 p.m. on Sunday, Oct. 6, in 3 Davidson Hall.

The lectures will focus on the synthesis and properties of functional macromolecules. The session is open to the university community and will feature Ralph H. Colby from Pennsylvania State University, Department of Materials Science and Engineering, Geoffrey W. Coates from Cornell University, Department of Chemistry and Chemical Biology, and Donald J. Leo from Virginia Tech, Department of Mechanical Engineering.

For more information, contact Cheryl L. Heisey, 1-3329, rogersmc@vt.edu.

Virginia Tech to celebrate anniversary of Clean Water Act

By Susan Trulove
The Clean Water Act, which was signed into law in 1972, aims to restore and maintain the nation’s water quality. During the week of October 14-19, the Water Resources Research Center at Virginia Tech will celebrate the 30th anniversary of the Clean Water Act with a focus on the Stroubles Creek watershed and the Duck Pond.

The Water Center launched the Stroubles Creek Watershed Initiative in 1999 to provide research opportunities in education, outreach, and university-community partnership. The main campus is situated within the boundaries of the Stroubles Creek watershed. According to Tamim Younos, Water Center interim director and project leader for the initiative, the program provides an excellent opportunity for students and faculty members to think globally and act locally. Since 1999, more than 20 graduate and undergraduate students have participated in the program.

Highlights of the planned events during the week include a workshop by U.S. EPA experts on Use Attainability Analysis of polluted surface waters and a public meeting for the Stroubles Creek Total Maximum Daily Load (TMDL) process. The Clean Water Act requires developing a TMDL plan for impaired waters—that is, waters that do not meet established water-quality standards.

The third annual Stroubles Creek Watershed Forum will be held on Friday, Oct. 18. Students will present assessment results for the Stroubles Creek corridor land use, associated water-quality issues, and plans for restoration of Stroubles Creek.

Also, a brief ceremony will be held to dedicate the Duck Pond educational sign that was installed last May across from the Duck Pond gazebo. The sign, designed by Phi Sigma Pi Honor Society members and the Water Center interns in collaboration with the University Architect Office, introduces the watershed and Duck Pond features. Educational events related to water protection are planned in the Duck Pond area for citizens.

The events are sponsored by the Water Center, Virginia Tech Museum of Natural History, and the Service-Learning Center. For more information, go to http://www.vwrrc.vt.edu or contact the Water Center at 1-5624 or water@vt.edu.

Depression screening offered October 10

October 10 is National Depression Screening Day, and the Cook Counseling Center web site (http://www.ucc.vt.edu/) is offering a free and anonymous self test for depression.

The screening is available to all members of the university community including faculty and staff members, administrators and students. The self test is available on line throughout the year.

Individual who would prefer to talk to someone in person may call the Cook Counseling Center at 1-6557 or visit the screening booth in the Commons Hall lobby on October 10.

The Cook Center is sponsoring the screening program in collaboration with Screening for Mental Health, the non-profit organization that conducts National Depression Screening Day.

POLICE

continued from 1

shall not carelessly or maliciously interfere with the orderly passage of vehicles. They shall cross, wherever possible, only at intersections or marked crosswalks and “no pedestrians shall step into a highway open to moving vehicular traffic at any point between intersections where his presence would be obscured from the vision of drivers of approaching vehicles by a vehicle or other obstruction at the curb or side.”

For the past year, VTPD officers have been ticketing drivers who do not yield to pedestrians in the crosswalks. “Pedestrian safety is a shared responsibility by both the motorist and walking public; in other words, pay attention when crossing the street or driving on campus. Your safety is our priority,” VTPD Chief Debra Duncan said.
Arts and Sciences appoints development director

By Sally Harris

Bohnen has more than six years of professional fund-raising experience. At MSU, he managed all aspects of development for the College of Arts and Humanities, which consists of eight departments and has nearly 8,300 alumni. During his MSU tenure, Bohnen also served at various periods as the development director for MSU's College of Education, director of development for the university’s International Student Endowment, and director of development for MSU’s Campus Annual Fund Drive. He also managed the university’s annual faculty and staff initiative involving 1,123 faculty and staff and 110 volunteers, achieving 50-percent donor participation.

He was the principal constituent-based development officer securing more than $6 million during the first four years of MSU’s first-ever comprehensive campaign, and he assisted in surpassing the $35-million goal one year ahead of schedule.

Bohnen will work closely with Chang and the faculty to identify the development program for the College of Arts and Sciences. Bohnen will also be working with Nam Chang.

The consortium plans to start operations in January 2003 at rented facilities in Hampton. Permanent quarters for the NIA will be constructed with money raised by the consortium.

Another goal of the NIA is to stimulate commercialization of new intellectual property and facilitate the growth of new business opportunities related to advances in aerospace and atmospheric evolution of other planets, and effective military reconnaissance and civilian-research and development.

The Consortium will encourage participation in the NIA by other universities, McPherson said. “In particular, we will invite Hampton University to join us because of its space expertise in aerospace sciences and its proximity to NASA Langley.”

At full force, the Consortium plans to have as many as 250 researchers—faculty members, graduate students and associates—working for the NIA.

We are puzzled by the apparent priorities of the decision makers here at Virginia Tech.

On September 11, a ceremony was held to remember those who died in the terrorist attack in 2001. We understood that the original plan was to fire the cannon four times—in remembrance of the four planes that crashed. However, the decision was made to fire it only twice because it would disrupt classes too much to fire it all four times. Several selections were played on the carillon, but it was turned down low so that it was often impossible to hear above campus noise. Again, we were told that the decision to keep the volume down was because playing it louder would disrupt classes too much.

On the other hand, we had an evening football game on September 12. Faculty members were permitted to cancel classes after 4 p.m. Those not having the required game parking permits were asked to move their cars by 4:30 from the parking lots where they park when they go to work, and some were told they could not park in their normal lots as early as after 7 p.m. on Wednesday, the day before the game. The band is permitted to practice on the Drillfield at any time during the day, if they are practicing for a game. That their practicing may disrupt classes is not considered.

We find something terribly wrong with this picture.

Karen Mundy
R.J. McDaniel
Pat Ballard

The largest school on the re-organized chart is the School of Computational Science and Information Technology (the name is still under discussion). “In considering the reputation of Virginia Tech, we are looking at being very strong in information technology, not just computer science, but also business-information technology, computer engineering, and even instructional technology found in the College of Human Resources and Education,” Merola said. “We are trying to work with these different departments and colleges to form a school that will allow them to work in a more cohesive way to present themselves better to the outside world for the purposes of fundraising, obtaining grants, and showing how much we really have, as well as to help internally with cooperation.”

Merola said that some behind-the-scenes adjustments have yet to be implemented, such as “dealing with the computer system, i.e., who has authority to see certain information on the computer system, i.e., who has authority to see certain information on the computer system, i.e., who has authority to see certain information on the computer system, i.e., who has authority to see certain information on the computer system, i.e., who has authority to see certain information on the computer system, i.e., who has authority to see certain information on the computer system, i.e., who has authority to see certain information on the computer system, i.e.”

In terms of administrative issues and making the restructuring official, Merola added, those things occurred on July 1.

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Malaria mosquito genome elements may aid disease control

By Susan Trudove

Prevention of malaria through genetic control of the malaria mosquito has become more possible with the completion of the first draft of the genome of the Anopheles gambiae mosquito, reported today in Science. Among the co-authors are Virginia Tech researchers Zhijian (Jake) Tu, assistant professor of biochemistry, graduate students, Imad Al-Qadi and Richard Weyers, and post-doctoral associate Hongguang Shao, whose focus is the mobile genetic elements, or transposable elements, which make up more than 16 percent of the genome.

More than a hundred researchers in more than a dozen labs contributed to the project, led by Robert Holt of Celera Genomics. The sequence was posted in March. The article in Science analyzes the information and reports important findings.

Tu’s group is one of several labs involved in characterizing transposable elements (TE’s)—segments of nucleic acids, or genetic material, that move around the genome and have a significant impact on its structure and size. Frank Collins of Notre Dame University coordinated the efforts on TE analysis and is also a corresponding author on the Science article.

“When you look at the genome as an ecological system, TE’s are different lineages that co-evolve with the rest of the genome,” Tu said. “They evolve different relationships with the genome. Some are genetic parasites; they appear to do nothing except replicate within the genome. Others are used by the host—the individual organism’s genetic machinery—to perform biological functions.”

Portions of DNA can produce the enzyme to cut itself out of the genome, then paste itself in elsewhere. In addition to this DNA-mediated TE, there is RNA-mediated TE, which makes many RNA counterparts of itself in a process called transcription. The RNA molecules are copied into DNA (reverse transcription), and then integrated back into the genome.

Tu and colleagues expect that TE’s may be used to introduce new genes into the mosquito genome—gene vectors within disease vectors, such as a gene to block transmission of disease into the mosquito, halting the malaria parasites’ cycle.

Another use for TE’s is as markers, Tu said. “Because they are scattered throughout the genome, they can be used to distinguish between populations of mosquitoes of the same species.”

This is important in the current research, using the newly sequenced A. gambiae genome. Within the same species of malaria mosquito, some populations are better carriers of disease and some are more resistant to pesticides. “There is a genetic basis for these differences and these markers can help us determine these differences,” Tu said.

Tu’s lab is also working on mosquitoes that carry Dengue Fever and Yellow Fever and is starting work on species that carry West Nile virus.

Tu’s work on characterization and organization of transposable elements in mosquito genomes has been funded by the National Institutes of Health since his arrival at Virginia Tech in 1999.

VTPD identifies counterfeit football tickets

By Jean Elliott

The Virginia Tech Police Department and the Athletics Department have identified several instances in which counterfeit tickets were used to gain admission to the Marshall football game at Lane Stadium.

While there is no indication that the forgery is widespread, the department is investigating. Police Chief Deborah Duncan said “we are pursing numerous leads that we already have and intend to prosecute the culprits to the fullest extent of the law.”

Lane Stadium officials will increase scrutiny of tickets presented for admission at all of its remaining home games and will implement new screening procedures upon entrance to the stadium.

Fans who purchase or acquire tickets from third parties or outlets other than the Virginia Tech Athletics Ticket Office should be very cautious concerning the authenticity of their game tickets. Individuals found to be in possession of forged tickets will be removed from or denied access to the stadium.

In Other News

Engineering experts awarded Via professorships

By Karen Gilbert

Two faculty members from the Department of Civil and Environmental Engineering (CEE), Imad Al-Qadi and Richard Weyers, have received Via professorships. This endowed chair recognizes eminent faculty members and is funded by the Marion Bradley Via endowment.

Al-Qadi is nationally and internationally known for his research and scholarly works related to highway-pavement materials, non-destructive methods for infrastructure assessment, and infrastructure-management systems. He is the director of the Roadway Infrastructure Program at the Virginia Tech Transportation Institute. Al-Qadi is responsible for the design and implementation of all pavement-related research at the Smart Road. He received the 2002 International Geosynthetic Society Award for his pavement research, an honor awarded about once every five years.

Al-Qadi joined the CEE faculty in 1990 after receiving his Ph.D. from Penn State University. The National Science Foundation presented him with a Young Investigator Award in 1994, one of only 100 of such awards made nationwide to young, promising engineering faculty. In 2001, Al-Qadi was the recipient of the Virginia Tech College of Engineering Dean’s Award for Research Excellence. He has authored or co-authored over 150 publications and has presented his work at nearly 160 international conferences.

Weyers is an expert in concrete structures and a fellow of the American Concrete Institute. Weyers is a registered professional engineer and land surveyor and has been a professor for 22 years, 16 of which have been at Virginia Tech. Weyers holds two patents on stopping the corrosion of steel in chloride-contaminated concrete. He is the author of 138 publications, including refereed journal articles and technical meetings. The American Society of Chemical Engineers (ASCE) selected Weyers to address the problems with bridge systems in the United States at the Chemical Engineering Roundtable of Rebuilding America’s Infrastructure in 2001.

Students who worked on the project. In putting together a team, Wicks and Reinholz looked for students with an interest in electronics and computer interfacing, as well as a knowledge of LabVIEW. Completing the project in only six months, the team constructed a functioning system, met deadlines, and stayed within their budget.

“Is this a great example of good work done on time,” Wicks said. “These students really showcased their skills and were able to work together to retrofit the excavator.”

The team also won recognition for their work at a national competition. Wieland, along with undergraduate students Michael Fleming and Ian Hovey, demonstrated the project at NIWeek, an annual technology exhibition sponsored by National Instruments in Austin, Texas. From the stage of the Austin Convention Center, the students successfully operated the excavator—which was located 1,200 miles away in Blacksburg. The team won first place in the NIWeek 2002 Best Applications of Measurement and Automation Paper Contest.

The excavator has been moved from Blacksburg to Dahlgren. The Navy Explosives Ordnance Disposal team will inspect the excavator and determine how to dispose of any ordnance.