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**ON THE COVER**
A gull greets dawn on the Atlantic shore. Photo by Matthew Amey.
To our friends in Southern Delaware:

♦ ♦ ♦ The University of Delaware has a strong presence in Southern Delaware and a long tradition of service to its citizens.

The University’s campus in Lewes houses the classrooms, research space and offices of the College of Marine and Earth Studies, as well as the Virden Conference Center and facilities for the Hugh R. Sharp, UD’s 146-foot, state-of-the-art coastal research vessel. UD’s Paradee Center in Dover is an educational programming hub for Kent County’s business, government, civic and corporate institutions. The Carvel Research and Education Center, next to the Lasher Laboratory in Georgetown, is an important facility for the University’s College of Agriculture and Natural Resources, and provides office space for Sussex County Cooperative Extension, Master Gardeners and 4-H. Moreover, the University operates academic centers on the Dover and Georgetown campuses of Delaware Technical and Community College, where students can work toward an Associate in Arts degree before enrolling at UD’s Newark campus.

Of course, UD’s reach into Southern Delaware extends beyond its physical presence there. The University’s research programs address many issues of particular importance in Kent and Sussex counties, such as wind power and other alternative energy sources, the health of the environment along the region’s treasured wetlands and inland bays, community development and the needs of the agricultural community.

The University’s relationship with Southern Delaware will grow even stronger in the years ahead. UD’s new strategic plan, the Path to Prominence™, features as its first guiding principle “Delaware First,” an assurance that every Delawarean will have access to a top-quality education, and that the strengths and resources of the University will be applied to benefit the greater Delaware community. Underscoring UD’s commitment to the entire state is the inclusion of a key milestone: “To increase the University’s presence and engagement in Southern Delaware.”

Clearly, this magazine—highlighting the programs and projects uniting the University and the region—is a step in that direction. Enjoy this inaugural issue of Southern Delaware, and join us in bringing new energy, opportunity, and recognition to the First State.

Sincerely,

Patrick T. Harker
President

AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER—The University of Delaware is committed to ensuring equal opportunity to all persons and does not discriminate on the basis of race, color, gender, gender identity, age, religion, national origins, veteran status, or sexual orientation in its educational programs, activities, admissions or employment practices as required by Title IX of the Educational Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, Title VIII of the Civil Rights Act of 1964, and other applicable statutes. Inquiries concerning Section 504 compliance and information regarding campus accessibility should be referred to the Office of Disability Support Services (302) 831-4643, located at 119 Alison Hall. Inquiries concerning Title VII, Title IX and Section 504 should be referred to the Office of the Assistant Vice President for Affirmative Action (302) 831-4727, located at 119 Alumni Hall. The University’s Access Compliance Officer has been designated to handle inquiries regarding non-discrimination policies. The University’s Access Compliance Officer is: Title IX/Section 504/ADA Coordinator, Office of Disability Support Services, 119 Alison Hall, 831-4643, 302-831-8088 TTY. Inquiries may also be referred to the U.S. Department of Education, Office for Civil Rights, 400 Maryland Avenue, N.E., Washington, D.C. 20202-4600, or to the Equal Employment Opportunity Commission, 1314 East West Highway, Silver Spring, MD 20914.
Thirty guidance counselors from Southern Delaware high schools were briefed on the enhanced University of Delaware Commitment to Delawar- eans during a meeting held last fall at the William A. Carter Partnership Center on the Owens campus of Delaware Technical and Community College in Georgetown.

Originally announced in 2006, the UD Commit- ment to Delawareans is an academic roadmap de- signed to inform students and parents throughout the state of the courses and level of academic perfor- mance recommended for admission onto the Newark campus.

Robin Morgan, dean of the University’s College of Agriculture and Natural Resources, told the counselors that the UD Commit- ment to Delawareans has been ex- panded to include financial assistance to all Delaware students who qualify, as well as early notification.

For students who will be entering the University of Delaware in fall 2009, the Commitment was expanded to meet the full demonstrated financial need of those who fulfill the academic roadmap, inclusive of the cost of tuition, fees, on-campus room and board and books.

Also, UD has introduced rolling admissions de- cisions and early notification for all Delaware ap- plicants who meet the requirements outlined in the Commitment to Delawareans.

Discussing the Commitment in more detail, Louis Hirsh, UD director of admissions, explained that Delaware high school seniors who receive early ad- mission to the University of Delaware must maintain high academic standards.

Hirsh said that the new rolling admissions for Delaware residents means that notifications started going out after Jan. 1, and that the letters empha- sized that the individual student’s grades must re- main high for the rest of their school year or the letter will be rescinded.

Hirsh explained that while the requirements of the Commitment to Delawareans are very specific, Univer- sity admissions officials consider each applicant on a case-by-case basis, keeping in mind that there are many external factors that might affect a student’s performance.

The Commitment to Delawareans is an important part of the Delaware First guiding principle in the University’s Path to Prominence™ strategic plan.

Delaware First provides a commitment that UD will be the flagship of higher education in the state, both by ensur- ing that every Delawarean has access to a top-quality education and by applying the strengths and resources of the com- munity to benefit the greater Delaware community.

For details about the UD Commitment to Delawareans, please see the Web site, www.udel.edu/commitment. The site includes information on high school course selec- tion, financial aid and early notification for Delaware students.
Learn about marine science with a free tour of UD’s Lewes campus

The University of Delaware offers free, guided tours of its marine research complex in Lewes. Tours are led by trained volunteer docents who introduce the public to the research and teaching facilities of UD’s College of Marine and Earth Studies, which is housed at the campus. Since they began leading tours in 1992, docents have hosted more than 17,000 visitors.

Tours, which typically take under two hours to complete, begin with a 15-minute video highlighting some of the work being done at the college. Following the video presentation, the docents take visitors on a walking tour of the facilities. Tour content is suitable for ages 12 and older.

Visitors see laboratories where scientists conduct research on a variety of topics, including the ecology of coastal fish, population dynamics of blue crabs and genetics of marine organisms. The tour includes a visit inside the college’s greenhouse, where botanists are investigating new uses for marsh plants. Also included are a number of exhibits showing how scientists study extreme marine environments such as the frigid, ice-covered seas of the Antarctic and the super-heated hydrothermal vents found more than a mile below the sea surface. Scientists’ research on local issues, such as the impacts of land development on Delaware water quality and wildlife, is also highlighted.

A favorite stop on the tour is a tropical reef tank, which introduces visitors to one of the most diverse communities on Earth. With the rapid deterioration of coral reefs worldwide, the tank provides a springboard for discussions about the causes of and solutions to this global crisis.

June tours take place each Friday at 10 a.m. July and August tours occur each Tuesday and Friday at 10 a.m. Reservations are required by noon of the preceding day. For complete tour schedules and reservations, call (302) 645-4346.

In addition to summer public tours, the University arranges weekday tours year-round for groups of five or more people. Schedule by calling (302) 645-4346 at least one week in advance.

Located at 700 Pilottown Road in Lewes, the campus is accessible to visitors with disabilities.

A regional asset

Important research is conducted in coastal waters aboard the R/V Hugh R. Sharp

Southern Delaware is home to one of the most advanced floating coastal research laboratories in the world, the University of Delaware’s Research Vessel Hugh R. Sharp.

The $18.6 million ship was christened in 2005 at the Dakota Creek Industries shipyard in Washington state, where it was built, and commissioned the following year when it arrived at its homeport at the University’s Hugh R. Sharp Campus in Lewes.

The 146-foot research vessel was designed by Bay Marine of Barrington, R.I., and built by Dakota Creek Industries. It can carry between 14 and 20 scientists on cruises up to 18 days in duration.

The R/V Hugh R. Sharp has a modular design to enhance flexibility of use and features modern laboratories onboard, as well as the capability to carry two additional portable laboratories.

While one expedition is under way, scientists on shore can prepare the portable laboratories for the next. Recent research has included a project investigating how certain types of fish larvae come to the Delaware and Chesapeake estuaries after they’ve been spawned far offshore. A project this spring will use the University’s autonomous underwater vehicle to map hard-bottom habitats of Delaware Bay.

The ship has a north-south range from the Gulf of Maine to Florida, and can travel as far offshore as Bermuda.

Most of its work is being done in Mid-Atlantic coastal waters, from Long Island, N.Y., to Cape
Hugh R. Sharp was the founding president of Marine Association of Exploration for the Seas. He also helped to establish several laboratories and an endowed professorship in marine biochemistry.

The University and Delaware Tech signed an agreement renewing their association in 2007. The agreement was signed by UN President Orlando J. George Jr.

“The University is pleased to offer the Associate in Arts Program, which offers students a great option to begin a college education,” Harker said. “On behalf of all my colleagues at UD, our thanks to Dr. George and all of our friends at Delaware Tech for making this possible. We look forward to another four decades – and more – of cooperation between the University of Delaware and Delaware Tech.”

For information about the program, call the main administrative office (302) 831-4055 or see the Web site, www.udel.edu/associateinarts.

For information about the program at the UD Academic Center in Dover, contact Sharon Tucker at (302) 857-1280 or via e-mail at stucker@udel.edu.

For information about the program at the UD Academic Center in Georgetown, contact J. Richard Bonom at (302) 856-8654 or via e-mail at jrbacon@udel.edu.
University offers advanced degree education programs

The University of Delaware offers an array of advanced degree and specialized education training programs to teachers and administrators in Southern Delaware.

One of the most popular programs is the master of instruction, which both attracts the most students and meets important educational needs.

“We are pleased to offer some of our signature programs to educators in Southern Delaware,” Nancy Brickhouse, director of the School of Education, says. “Our master of instruction degree is designed for a wide range of teachers who are focused on improving the learning of their students.” Brickhouse says the program “is distinctive in that the culminating portfolio requirement for the program is aligned with the standards for the National Board of Professional Teaching Standards.”

The master of education in school leadership degree is a newly revised program that UD officials say they believe will become a national model for the preparation of school leaders. It is offered throughout the state via instructional television (ITV).

“This program was designed in collaboration with school leaders throughout Delaware to ensure that the program provides the kind of expertise relevant to the issues faced by today’s school leaders,” Brickhouse says.

Given the growth in the number of Spanish-speaking students in Southern Delaware, the University offers a Program in Teaching English as a Second Language. A graduate course of study is offered during the summer in Dover.

Additionally, teachers can complete a specialization in Teaching English as a Second Language as part of the master of instruction program. “With a growing number of students whose first language is not English, we recognize the needs for teachers throughout Delaware to have expertise in working with English language learners,” Brickhouse says. “For this reason, we have begun to offer courses to help in this critically important area.”

Also, in collaboration with the Delaware Department of Education, the University is offering the Delaware Alternative Routes to Certification program – designed for professionals interested in becoming teachers – on the Newark campus and also at the William A. Carter Partnership Center on the campus of Delaware Technical and Community College in Georgetown.

With more than 10,000 visitors and a sunny, mild day, Coast Day 2008 gave many visitors an opportunity to do just that.

The magic show, presented by Luther, the University of Delaware’s Maxwell P. and Mildred Harrington Professor of Marine Studies, was an event that taught audience members about chemistry and oceanography.

Several other popular events reflected the 2008 theme, “Coastal Challenges — Coastal Solutions.” Those events included an exhibit that showed visitors how to start their own home composting system and another that demonstrated the University’s zero-pollution car.

At the event’s kick-off ceremony, UD President Patrick Harker praised event organizers CMES and Delaware Sea Grant for their work on environmental issues. Explaining that the coast is an area where there is tremendous pressure, he said we have to find ways to

For information on University of Delaware degree programs, contact Jackie Wilson, assistant professor in the School of Education, at 855-1621 or via e-mail at jwilson@udel.edu.

For information on the Alternative Routes to Certification program, contact Linda Hughes, coordinator of the Delaware Center for Teacher Education on the Newark campus, at (302) 831-4588 or via e-mail at hughesia@udel.edu.
Carl Zampini can lay claim to making the best crab cakes on the Delaware coast.

Zampini, a chef on the University of Delaware campus in Newark, won the 2008 Coast Day Crab Cake Cook-Off. Zampini squared off against seven other finalists in the event, held in October at the University of Delaware’s Hugh R. Sharp Campus in Lewes. He won for “Carl’s Crab Cakes with a Meyer Lemon Rémoulade,” a recipe that begins with a traditional crab cake but has a special sauce to add an interesting culinary twist.

“The lemon was more of a trendy way to make the traditional more gourmet,” he said.

Zampini received a $200 cash prize and a new grill for his win. His recipe stood out because the taste of the crab came through and the other flavors worked well together, said judge Lisa Weddig of the National Fisheries Institute.

Judging the friendly competition along with Weddig were Scott Douglass, senior vice president and treasurer at the University of Delaware, and Darla Koff of Frederica, last year’s winner.

It was fun to be a judge, Weddig said, but it wasn’t an easy job. “It was a very hard decision. It was a close call. I think the top three differed by only one point.”

Second place and a $150 prize went to Spencer Hunt of Monkton, Md., for his “Crustacean Sensation Crab Cakes.” His recipe featured a lemon-honey mustard sauce that used sour cream, honey, Dijon mustard and lemon juice.

Winning third place and $100 was Raymond Williams of Bear, Del., with his “Delaware Crab Cakes with Corn Relish.” Williams’ cakes included chopped green and red peppers and a chili mixture containing...
mayonnaise, spicy mustard and chili sauce. In addition to corn, the relish included garlic, grape tomatoes, red onions and Old Bay seasoning.

Other finalists in the competition included Bonnie Robinson of Seaford, Shawn West of Milford, Steve Ruiz of Wilmington, David Brown of North East, Md., and Jill Culbert of New York.

The finalists set up their favorite appliances under a tent to prepare their recipes in front of the judges and interested onlookers looking to help taste-test any leftovers.

“We had a lot of really interesting finalists this year, such as ‘East Meets West with Dikon Radish and Cucumber Salad,’” said Doris Hicks, seafood specialist with Delaware Sea Grant and organizer of the Coast Day seafood competitions. “Another was a hickory smoked lump crab cake. We’ve been doing this for 19 years, and you never know what’s going to win.”

Each finalist received a copy of the commemorative Coast Day Crab Cake Cookbook, which contains all the finalists’ recipes from the first 17 years of the contest. Copies are available by calling (302) 831-8083. The cookbook costs $6.

Ron Brobst’s New England clam chowder wins

삼성 크래프트 케이크
COLE FLYNN NEVER HOPE TO BECOME A MARINE SCIENTIST. BUT AFTER A DAY SPENT MINING THE COASTLINE FOR DELAWARE’S MOST INTERESTING MARINE CREATURES, THE HIGH SCHOOLER SAID HE HOPES HIS FUTURE CAREER INVOLVES THE OCEAN.

“We got to see lots of animals, catch them and study them,” he said. “I definitely didn’t expect to find a full-blown live horseshoe crab.”

Flynn, a senior at Brandywine High School in Wilmington, was one of 10 students who participated in the first-ever College of Marine and Earth Studies TIDE Camp in July 2008. TIDE, or Taking an Interest in Delaware’s Estuary, is intended to give high schoolers an up-close look at the scientific processes of Delaware Bay.

And that’s just what it did. For two weeks — one week at UD’s Newark Campus and one at its Hugh R. Sharp Campus in Lewes — campers got to do things like build their own underwater research vehicles, interact with faculty members, visit state-of-the-art research labs, tour marshes and study wildlife at the beach. The camp was a great success and is now heading into its second year.

Seining, the activity that turned up Flynn’s horseshoe crab, had students dragging nets across the ocean bottom to see what kind of critters they could find. As they got the hang of it, their nets came up heavy with horseshoe crabs, jellyfish, seahorses and all kinds of fish — silversides, lookdowns and pipefish.

One of the students eagerly studying the nets’ contents was Andrew Tobias, of Lebanon, Pa. Tobias, who named seining as his favorite camp activity, said he’s always had an interest in oceans, oceanography and estuaries. The camp only strengthened that, he said.

“The instructors gave us deeper insights on issues like the physical and biological aspects of marine biology,” he said. “I learned how delicate the different marine ecosystems are.”

For the students, TIDE was a rare opportunity to get personal with the inhabitants of the world beneath the waves. It also was a chance to see how scientists study the ocean and coast.

“We wanted to make sure we touched on all the different aspects of marine science,” said Frank Newton, assistant dean and one of the camp’s organizers. “So the students learned about everything from mapping to oceanography to air-sea interaction to the ocean’s connection to climate and climate change.”

In a seminar given by Willett Kempton, assistant professor of marine policy, they learned about Delaware’s extensive offshore wind resources and each took a ride in the electric car Kempton and his UD colleagues developed. A tour of the Air-Sea Interaction Lab showed the students the importance of understanding the physics behind the movement of wind over water and waves.

Another popular event not only showcased UD scientists’ work but also tested the students’ teamwork skills. The “build your own underwater research vehicle” competition let groups of campers create mini versions of machines used by scientists to study life on the ocean floor. The students received all the materials they needed — PVC tubing, propellers and motors from bilge pumps — and were asked to do everything from constructing the vehicles to wiring the motors. Once the machines were fitted with an underwater video camera to help with navigation, the teams then faced off to see whose worked the best at doing things like retrieving objects from the bottom of a pool.

“Our had trouble seeing in the water, but it moved really well,” said Claire Hoelmer, of Newark. “It won the mobility test.”

Looking on as the students competed in the research vehicle challenge was Trevor Metz, a TIDE camp adviser and seventh-grade science teacher at Fred Fifer Middle School in Camden. Metz, a UD alumnus, applauded the camp for challenging students intellectually and giving them unique hands-on experiences.

“To have that type of technology, to have access to all the research facilities a university has to offer, and to have the opportunity to experience marine science like they did,” he said. “Absolutely, they are lucky.”

In their applications, which are due in April for the July camp, potential TIDE students must show they have an interest in marine science and have solid math and science skills. Learn more at the Web page, www.ocean.udel.edu/TIDE.
CALLING ALL UD ALUMNI & FRIENDS

Come back to campus for a Dela•bration like no other!

FORUM & REUNION WEEKEND 2009

Mark your calendar!

JUNE
5-7

DON’T MISS FRIDAY NIGHT’S PARTY ON THE GREEN with Love Seed Mama Jump UD’s version of Mug Night kicks off a weekend packed with festive activities. Free commemorative mug for all adults!

Other scheduled activities include:

- Saturday night All Alumni Dance Party with the Fabulous Greaseband
- Blue Hen 5K Run/Walk
- International Foods Picnic
- Special networking opportunities
- Family-friendly events for all ages
- Keynote Speaker: Pat Williams, Sr. VP of the NBA’s Orlando Magic
- Plus, special reunion events for the classes of ’04, ’99, ’84 & ’59

*programming subject to change

For the most up-to-date schedule of events and to register, visit UDconnection.com/reunionweekend or call (302) 831-2341.

IN TOUCH • INVOLVED • INSPIRED
www.UDconnection.com/ReunionWeekend

A guide to Cooperative Extension in Delaware

- University of Delaware Cooperative Extension connects the public with University knowledge, research and resources to address youth, family, community and agricultural needs.
- Established to help farmers and farm families when our society was agrarian-based, Cooperative Extension is here to serve Delaware’s agricultural community. Extension educators and specialists are committed to helping farmers improve efficiency while being responsible stewards of the land.
- Farmers, food processors, agri-business, seed and biotechnology companies, food distributors, power companies, seed suppliers, garden centers, nurseries and sod producers all utilize Extension programs.
- Home and landscape horticulture is one of the fastest growing areas of Cooperative Extension in Delaware. Extension agents in this program assist homeowners, landscape industry professionals and others to maintain healthy lawns, gardens and landscapes that are sustainable, incorporating native plants, rain gardens and composting areas.
- This program is run in large part with the assistance of volunteer Master Gardeners in each county, who enjoy gardening, want to learn more about the environment and have a desire to help others in their community.
- Cooperative Extension’s Family and Consumer Sciences educators help build skills and confidence through outreach focusing on finances, food and nutrition, community safety, personal development and family well-being across the lifespan.

Cooperative Extension offers programs for people of all ages. Photo by Kathy Atkinson

Family and Consumer Sciences programs take place in county Extension offices, in workplaces, schools, community centers and other settings. FCS educators often work in collaborative partnerships to strengthen community programs, based on best practices for children, youth and their families.

4-H is a community of young people throughout Delaware who are learning leadership, citizenship and life skills. More than 70,000 Delaware youth take part in 4-H clubs, after-school programs, camps and other activities. That’s 47 percent of all eligible youth in the state – more than twice the percentage of any other state.

Although 4-H has its roots in rural areas, today it operates in cities, suburbs and towns, as well. All 4-H programs, clubs and sites share the fundamental 4-H ideal of “learning by doing,” which encourages youth to experiment, innovate and think independently.

4-H’s innovative programs range from service-learning camps to obesity prevention projects. Many initiatives focus on helping Delaware youth develop the skills necessary to be marketable in tomorrow’s workplace.

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Janice Seitz, associate dean and director of Cooperative Extension and Outreach
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SOUTHERN DELAWARE

Web: http://ag.udel.edu/
extension/sou
UD Library offers electronic resources to Southern Delaware

A rich array of University of Delaware Library electronic resources is available to residents of Southern Delaware through the library’s Web page, which is at www.udel.edu/library.

Southern Delaware users are invited to use the link labeled For Alumni and Friends, found on the upper right hand side of the page. For Alumni and Friends, which is available 24 hours a day and for which there is no charge, is the place to start your search from Southern Delaware for online resources and services available from the University of Delaware Library.

These resources include DELCAT, Subjects A-Z, Frequently Asked Questions, Ask a Librarian, Online Exhibitions, Internet Resources, Special Collections Finding Aids, WorldCat Local, a Virtual Reference Desk and more. DELCAT, the University of Delaware Library online catalog, contains information about the collection and also provides links to other electronic resources. Once library users find materials via DELCAT that are in the circulating collection of the University of Delaware Library, they have access to those resources through their local public library.

The University of Delaware Library lends books and provides copies of articles to all Delaware public libraries at no charge through a smoothly operating and highly efficient Interlibrary Loan service. Southern Delaware residents may request those local public libraries to place an Interlibrary Loan request. The University of Delaware Library also offers access to WorldCat Local, the world’s largest network of library-based content and services via the library’s Web page. WorldCat Local encompasses the holdings of more than 10,000 libraries around the world. It can provide online search results by ZIP code so a user can find out what is available at a local library.

Available at no charge is a Subject Guides feature, found on the library home page, that provides online links to important Internet resources by subject and which have been verified by library staff to be reliable.

The University of Delaware Library has established an Institutional Repository, which uses open source DSpace software to capture, store, index, preserve and redistribute the non-copyrighted intellectual output of the original research of UD faculty and staff in digital form, including technical reports, working papers, conference papers, images and more. Library Digital Collections provide interesting resources including the Digital Bibliography of Delaware, the American Civil War Digital Collections at the University of Delaware Library, the Historic Map Collection, the Willard Stewart Photographs for the WPA & Historic American Buildings Survey, the Delaware Post Card Collection and other materials. Exhibitions of the University of Delaware Library, available online, feature thematic and intellectually stimulating displays of rare and unique materials from Special Collections. 

Increasing coastal flood and storm awareness

BY WENDY CAREY

The dynamic nature of Delaware’s shoreline exposes communities, properties and people to a unique set of hazards. The coastal landscape changes dramatically and rapidly in response to winds, tides and waves generated by coastal storms.

As the population along Delaware’s coasts continues to increase, residents and structures become more vulnerable to coastal hazards such as wind, waves, erosion and flooding of low-lying areas. To help coastal citizens prepare for these threats, the Delaware Sea Grant College Program, which is housed at the University of Delaware’s College of Marine and Earth Studies, engages residents in various educational outreach initiatives.

Spearheaded by coastal processes and hazards specialist Wendy Carey, those efforts include seminars and workshops for homeowners, community groups, elected officials and building code officials to help them understand the steps they can take to reduce flood and wind damage from coastal storms.

Currently, Carey is working with the Delaware Department of Natural Resources and Environment Control and others to help communities identify specific threats, assess risks and reduce vulnerabilities to coastal hazards. This program’s goal is to enhance a community’s capability to prepare for, endure, respond to and recover from a significant coastal hazard event with minimal disruption and damage to public health and property.

In all her outreach efforts, Carey wants residents to understand the forces at work along Delaware’s coastline. With that knowledge, individuals and communities can begin to make informed decisions about how to mitigate potential dangers and sustain healthy and thriving populations, infrastructure and economies.

The first things for residents to know are their storm and flood risks – residents should learn how a coastal floodwaters are a fact of life along the Delaware coast. The photos above depict ’62 storm damage. Photo, left, by Norman Rositzer, www, by Don Wiedmann
“Although the origins of these storms differ,” Carey said, “tropical systems and northeasters share many characteristics, and their impacts on the coast can be similar.”

Both types of storms are characterized by strong winds, high waves and extreme tides. Gusty winds can blow shingles off roofs and down trees and power lines. Storm and associated wind, rain and floods can affect their family and property. Two types of coastal storms affect Delaware beaches: tropical systems and northeasters. Hurricanes, a type of tropical system, are unquestionably the more powerful of the coastal storms. While the state has never experienced a direct hurricane hit since records have been collected, tropical storm systems have passed over and near Delaware annually. Northeasterners are a year-round threat to coastal Delaware. They occur more frequently here, last longer and are likely to impact larger areas. Named for the direction from which their winds blow, these intense storms move along the coast with winds blowing directly from the northeast, right off the Atlantic Ocean onto the shoreline. Winds can lift large objects and blow them through the air, hurling projectiles and causing additional destruction. Torrential rainfall (6 inches or more of accumulation) often results in overtopping of creeks, streams and rivers, as well as flooding of roadways and floodplains. High waves, tide and storm surges result in extensive flooding of low-lying coastal areas. Structural debris that ends up in the water can act as battering rams, further affecting buildings, particularly foundations.

Delaware’s most damaging coastal storm on record was a northeaster that occurred over a three-day period and five extremely high tidal cycles from March 6-8, 1962. The storm eroded the state’s coastline, demolished buildings and claimed several lives. Winds reached speeds of 70 miles per hour. Offshore waves were recorded at higher than 40 feet, while waves in the surf zone were reportedly 20-30 feet high. The storm tide associated with this historic northeastern was 9.5 feet – the highest tide ever recorded in Breakwater Harbor, at the mouth of Delaware Bay. Carey cautioned that even though the ‘62 storm occurred decades ago, a severe coastal storm like it could hit any time, and it’s best to be prepared.

“I try to highlight the fact that a powerful storm will hit Delaware again,” she said. “The next time a coastal storm strikes, you may not have much time to act. Learn how to protect yourself and how to cope with winds, rain, storm surge and flooding by planning ahead.”

“THIS IS BETTER THAN RECESS,” enthused one dark-eyed 6-year-old, as she began painting a pumpkin at La Casita Community Center in Georgetown. She and 35 other first- and second-graders gather there every Friday for a 4-H after-school club led by Sussex County 4-H educator Mary Argo.

Most of the children have been in this country only a few years, or in some cases, just a few months. Their parents brought them here from Guatemala and other Latin American countries to make a new life in Sussex County’s agricultural community.

Club activities range from science experiments to service projects, cooking to crafts. This particular Friday, just a week before Halloween, the children decorated pumpkins with paint, glitter and felt. In Guatemala, it’s kites, not pumpkins, that take center stage this time of year. Children go trick-or-treating on Oct. 31, but the main event is Day of the Dead, on Nov. 1, when Guatemalans fly kites into the heavens, carrying messages to deceased ancestors.

“I thought it would be fun to introduce these children to U.S. Halloween customs and traditions,” says Argo. “They are eager to learn everything they can about their new country.”

A few months later, the winter winds howled at the windowpanes of La Casita one Friday afternoon as another 4-H educator, Ernie Lopez, arrived to lead a 4-H club geared to older children, aged 8 to 13.

“Hey, Mr. Lopez!” “Que pasa?” “He’s here!” Thirty kids swarmed out of their meeting room, where La Casita volunteers were serving them snacks, to greet their 4-H leader.

Lopez acknowledges that it’s flattering to be greeted like a rock star but he says it’s the educational opportunities – not him – that get the 4-Hers cheering.

“Even though these kids have been in school all week long, they come here on Friday afternoon eager to learn more – about everything from environmental science to public speaking.”

Lopez, who is fluent in Spanish, stresses to the
Lopez has developed an environment of mutual respect that allows these tweens and teens to open up and talk about their struggles to assimilate, ranging from language gaffes to homesickness.

Children the importance of English language fluency for success in school and daily life, as well as later career success.

“It’s not enough to get by in English,” says Lopez. “I want these kids to speak English as flawlessly as if they were native born speakers. I use fun, interactive activities to help them work on their pronunciation skills and comprehension.”

Most importantly, Lopez has developed an environment of mutual respect that allows these tweens and teens to open up and talk about their struggles to assimilate, ranging from language gaffes to homesickness.

“Every week is different, but the one constant is that we always start each club meeting with a time to share and connect about the week’s high points and low points,” says Lopez.

Sometimes the acculturation process can be as simple as learning about U.S. law regarding things like bicycle helmets and seat belt use. Extension safety educator Mike Love has visited both 4-H clubs to share and connect about the week’s high points and low points,” says Lopez. “What I want most is to see 4-H be the pipeline to UD. I’d love to see every one of them apply and be accepted to UD.”

“Through the breadth and depth of activities offered, these 4-H clubs are a window to the outside world for young people of limited means,” says Jan Seitz, associate dean of the University of Delaware’s College of Agriculture and Natural Resources and director of UD Cooperative Extension. “Mary and Ernie are doing incredible things with these kids. I look forward to growing this type of 4-H outreach in Sussex County, and throughout the state, in the years ahead.”

Building a better bean

SCIENTIFIC RESEARCH IS USUALLY CONDUCTED in high-tech and climate-controlled laboratories but it also can take place in hot, dusty farm fields. Just ask Emmalea Ernest, who frequently spends her work days in the fields of Sussex County, driven by her quest to build a better lima bean.

A UD Cooperative Extension associate for vegetable crops, Ernest is seeking to develop new varieties of lima beans that are flavorful, produce consistently high yields and are resistant to disease. She is the only researcher in Delaware working on lima bean breeding and genetics and one of perhaps a half-dozen nationwide. “Lima bean research is lonely work,” says Ernest. But her research is vitally important to Delaware agriculture.

Grown primarily for processing, lima beans are planted on more acres in Delaware than any other vegetable crop. Baby limas and Fordhook varieties are used in processing; the small amounts of pole lima beans grown in the state are strictly for the fresh market.

Lima beans can be double cropped, thus offering growers maximum utilization of their land. Limas are often planted in June or July after a pea or small grain crop. And the same harvesting equipment is used for peas and limas, which makes this double-cropping even more advantageous.

However, lima bean growers face many challenges, the biggest of which is called downy mildew. This fungus disease can cause heavy losses when weather conditions favor its development. Ernest is working on baby lima varieties that are resistant to downy mildew.

She also is working on varieties of Fordhook limas that are well-suited to Delaware growing conditions.

Fordhooks aren’t just mature versions of baby limas but a totally different bean. Known as butter beans in the southern U.S., Fordhooks are larger, lighter in color and have a stronger taste than the baby lima varieties.

Emmalea Ernest is working to develop new varieties of lima beans. Photos by Danielle Quigley
When she’s not focused on improving lima beans, Ernest conducts research on watermelons, peas, pickling cucumbers and other vegetable crops that are important to Delaware.

The seeds of these plants will then be advanced a generation in the greenhouse as Ernest continues her trial-and-error process of bean breeding.

Plant breeding is a slow, tedious process. Cultivars should be evaluated for multiple years prior to release. Last summer, after four years of research, Ernest was finally ready to test 12 of her inbred lines of limas against proven industry varieties. And unlike conventional research laboratories, where conditions can be carefully controlled, lots can go wrong in Ernest’s “outdoor laboratory.”

“My biggest ‘Oh, no’ moment was the summer of 2006 when we had seven inches of rainfall in a short amount of time,” she says. “Half of my research plots were flooded and I lost a number of plants. It really set my research back that year.”

Ernest, who is native of Lancaster County, Pa., received a bachelor’s degree in horticulture from Penn State University and a master’s in plant breeding and genetics from Michigan State University.

She joined the staff of UD Cooperative Extension after meeting Ed Kee at a gathering of the Bean Improvement Cooperative, an international association of bean breeders from both the public and private sectors. Kee, who retired from UD Extension last year and is now the Delaware secretary of agriculture, was impressed with Ernest and encouraged her to apply for an open position as an assistant researcher.

When she’s not focused on improving lima beans, Ernest conducts research on watermelons, peas, pickling cucumbers and other vegetable crops that are important to Delaware.

The Ellendale resident says she loves living in Sussex County and enjoys being outside as much as possible, though she saves her beach outings for winter, when the crowds are gone. She also likes knowing that her high school peers became aware of UD through its Associate in Arts program offered throughout the state.

Another popular program for high-school students is the UD Summer College program, which lets high school sophomores and juniors live and learn on the Newark campus during the summer.

When asked to give advice to prospective students from Southern Delaware, Richardson said students should make sure they keep up their grades during their senior year, stay involved in school activities and participate in community service.

Sophomore Komal Pandya, 19, is a biological sciences major from Mililbooro, about an hour and a half...
‘As I started visiting the schools, I realized Delaware was the place I wanted to be.’

— Komal Pandya, sophomore

Away from the Newark campus. She has lived there for four years and attended Sussex Central High School. Like Richardson, Pandya said she decided to go to UD because it was convenient for her to be in state and close to home. She said she absolutely loves the University’s campus and atmosphere.

“As I started visiting the schools, I realized Delaware was the place I wanted to be,” Pandya said.

Pandya said she decided to become a Blue Hen Ambassador because she was impressed by the way her tour guide portrayed the University when she went on a tour as a prospective student. She thought that becoming a Blue Hen Ambassador would be a great way to show pride in UD.

At Sussex Central High, Pandya said she learned about the University through college fairs and from representatives who visited to talk about the advantages of coming to UD.

She also said the University promoted the Associate in Arts program, offered on Delaware Technical and Community College campuses in Dover and Georgetown, and the state Student Excellence Equals Degree (SEED) scholarship program.

Pandya, who has lived in all parts of Delaware, said increased student representation from Southern Delaware would be significant for the University as it seeks diversity on campus.

“If there were more students from Southern Delaware, it would help UD,” Pandya said. “Seeing more students from Southern Delaware would bring a lot of diversity to the University.”

Brittany Jackson, 21, is a senior biological sciences major from Lewes. She has lived in the Lewes area her entire life and attended Cape Henlopen High School.

Jackson said she was “almost positive” that she wanted to go to UD from the beginning of her college search. She said she was impressed with the study abroad program and the undergraduate research program, and has been able to participate in both of these programs while attending UD.

Jackson also said she wanted to distance herself from home but also be able get back quickly if she needed to. She pointed out the differences between the environments of Sussex and New Castle counties, saying New Castle County is more crowded and dense, industrial and influenced by Philadelphia, while Sussex County contains many farms, crop fields and beaches. “It’s nothing like up north,” she said.

Jackson said the University was involved during her high school days by providing the pre-collegiate Academic Challenge program, which enabled students in the Sussex County school districts to take advanced English and math classes so that by the time they reached their junior and senior years in high school, they would be able to take UD classes at the Delaware Technical campuses.

During her sophomore year at UD, Jackson helped put together a video trying to reach out to Delaware’s middle school and high school students in conjunction with the University’s Commitment to Delawareans, a program that provides a roadmap for students as they prepare themselves to apply for college.

Jackson said the program helps steer Delawareans on the right path to gain acceptance to UD.

As a Blue Hen Ambassador, Jackson has been involved in a Just for Delawareans panel that helps promote the school to younger Delaware students.

She said students can have a great time and receive a great education at the University of Delaware.
the assembled group, many of them strangers before the meeting, began to think of themselves as a singular community.

Expressive, respectful and different in many ways, what came to the surface was that all of them had a common affection for Sussex County.

As its name implies, that is what Coastal Community Enhancement Initiative is all about. Jim Falk, director of the Sea Grant Marine Advisory Service and CCEI partner, feels UD’s commitment to the region can make a difference using the University’s educational and outreach expertise.

“Coastal communities across the country are facing rapid growth in population,” says Falk. “This is changing the face of many of these communities as they work to find ways to attract the inflow of new residents (many of them retirees) and deal with increased traffic congestion and the ever-changing landscape due to both residential and commercial development.”

Bernie Dworsky, CCEI member and policy scientist with UD’s Institute for Public Administration, agrees that changes for Southern Delaware have been substantial. “CCEI is an opportunity to marshal the resources of the University of Delaware and work with various governments and community organizations throughout Sussex County in addressing issues related to the changes,” Dworsky says. “All three colleges participating in CCEI have had a long history of individual involvements in Southern Delaware. CCEI offers a way to collaborate and coordinate those efforts.”

The Heart & Soul project is one of several public issues CCEI hopes to bring before communities, providing the tools, venues and opportunities to think of the larger picture.

By becoming a catalytic organization in Southern Delaware, CCEI works across existing lines of division, geography and other boundaries that in the past have traditionally kept people apart. CCEI strives to engage communities to build resources, capacity and political will for change.

There will be much to discuss. Land use, heritage tourism, farm and forest preservation, broadband availability, appreciating the cost and benefit of growth, community planning and visioning and using new technologies such as Future Scan and Community Viz all fall under what will be CCEI’s very large umbrella.

Every crab counts

Horseshoe crabs are among the world’s oldest and most fascinating creatures. The earliest horseshoe crabs were crawling around Earth’s shallow coastal seas for at least 100 million years before the dinosaurs even arrived, about 200 million years ago. Since that time, Earth’s land masses have shifted dramatically and many of the species associated with them have evolved. Horseshoe crabs have survived and today remain as ancient as they were those millions of years ago.

The animals — which are actually more closely related to spiders and scorpions than crabs — are a vital part of the ecosystem. Horseshoe crab eggs are an important food source for fish, gulls and migratory shorebirds. A significant connection has been identified between the arrival of spawning horseshoe crabs on Delaware Bay beaches and the spring migration of many species of shorebirds that stop along those shores to rest and feed on horseshoe crab eggs.

Recognizing the great importance of these creatures, the state of Delaware named the horseshoe crab its official marine animal in 2002.

Of the four species of horseshoe crabs that exist in the world, three are found in the western Pacific, from Japan to Vietnam. One species, Limulus polyphemus, is found along the western Atlantic coast from Maine to the Yucatán Peninsula, with the center of the population in Delaware Bay.

Concern about recent declines in Delaware Bay’s horseshoe crab population due to overharvesting and deterioration of spawning grounds has spurred research to ease pressure on the animal. The University of Delaware and the Delaware Sea Grant College Program have multiple efforts under way to help ensure these important animals are around for many years to come.

One project is aimed at stemming overharvesting of the animal, which is used as bait in the eel and striped bass industries.

For more information about the University of Delaware Coastal Communities Enhancement Initiative, visit the Web site at www.ccei.udel.edu/index.html.
Make your own horseshoe crab model
When people see for the first time this strange creature with an armored shell and spiked tail, it is often with trepidation, along with the question, “What is that thing?” Meet the remarkable horseshoe crab! To help people learn more about these amazing animals, Delaware Sea Grant offers a full-color, three-dimensional model of the animal, which children or adults can assemble in approximately 15 minutes. To order your own horseshoe crab model, call (302) 831-8083.

conch fisheries. A common practice has been to collect the females when they come ashore to spawn in the spring and then quarter them for bait for eel and conch pots.

College of Marine and Earth Studies Dean and Delaware Sea Grant College Program Director Nancy Targett is working with her students and in partnership with the state of Delaware and DuPont scientists to create a viable, cost-effective artificial bait that mimics the chemical attractant in the horseshoe crab.

This research also could benefit the mid-Atlantic region’s multi-million dollar eel and conch industries.

Another effort is helping resource managers looking to track horseshoe crab numbers.

— especially at high tide during the months of April, May and June — female horseshoe crabs crawl out of bay waters to lay eggs in shallow nests dug into upper beach sand. The small green eggs hatch when high tides reach them again in four to eight weeks.

It is during this spawning time that the horseshoe crab census takes place. The results of the survey show a peak in 1990, when 900,000 adults were counted. Recent surveys suggest a stable but much lower population of mature adults and a growing population of juveniles.

Despite its threatening appearance, the horseshoe crab is harmless. Photo by Kathy Atkinson

Each spring since 1990, volunteers working with Delaware Sea Grant and other partners have come out to count the animals on Delaware Bay beaches. During peak spawning periods — especially at high tide during the months of April, May and June — female horseshoe crabs crawl out of bay waters to lay eggs in shallow nests dug into upper beach sand. The small green eggs hatch when high tides reach them again in four to eight weeks.

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Despite its threatening appearance, the horseshoe crab is harmless. Photo by Kathy Atkinson

Ocean Currents Lecture Series focuses on marine environment
Are you curious about issues that affect the marine environment? Then you’re invited to join the College of Marine and Earth Studies for the annual Ocean Currents Public Lecture Series at the University of Delaware’s Hugh R. Sharp Campus in Lewes.

The Ocean Currents Lectures cover a wide variety of topics related to the ocean and coast. 2008 topics ranged from the natural history of the osprey to rescue programs for stranded marine mammals.

The lectures, which are free and open to the public, take place once a month from May through August. Talks begin at 7 p.m. in Room 104 of Cannon Lab at the Lewes campus on Pilottown Road.

The hour-long talks are followed by light refreshments. While the lectures are free, seating is limited and reservations are suggested.

Be sure to check out the College of Marine and Earth Studies Web pages this spring to see lecture dates and times as they become available.

Visit the college’s Web site at www.ocean.udel.edu and click on Workshop, Seminar, Lecture and Event Schedules.

DelDOT employees continue learning through Engineering Outreach
By Diane Kukich

UD provides training for Delaware Department of Transportation engineers. Photo by Ambre Alexander

JONATHAN TICE, JOSEPH NATALE and Javier Torrijos all have engineering degrees, but they can still be found in University of Delaware classrooms, learning about topics such as culvert and bridge design. The three DelDOT engineers are all continuing their education through UD’s Engineering Outreach (EO) Program.

“The UD Engineering Outreach program provides our staff with many educational opportunities that we could not get without extensive travel,” says Dennis O’Shea, assistant director for design in DelDOT’s Division of Transportation Solutions. “Their instructors are well qualified in the fields of discussion; many times, they’re the national experts.”

According to Kathy Werrell, assistant dean in UD’s College of Engineering and director of EO, the program is designed to help engineering professionals keep their skills current or develop new engineering and business competencies. Outreach offers a variety of resources to make such technical renewal convenient and accessible, including short courses, distance learning and even company worksite courses tailored to customer needs.

DelDOT has taken advantage of the latter opportunity, with Outreach offering basic mathematics refresher courses to its technicians. The courses are taught at a central location in Dover to facilitate attendance by DelDOT employees from throughout the state.

“I’ve taken just about every structures-related short course offered by Engineering Outreach since I graduated,” says Natalie, who earned a bachelor’s degree in civil engineering at UD in 2008. “The courses are really practical and especially valuable when it comes to learning and applying new software. DelDOT is very supportive of our doing this — I get periodic e-mails from my supervisor to alert me when relevant courses are being offered.”

“The courses have really helped me get up to speed in the field,” adds Tice, who is also a 2008 graduate of UD’s civil engineering program. “I’ve already taken four of them since I graduated in May.”

Torrijos finds that he benefits from not only the expertise of the instructors but also the knowledge of others in the class, who represent a wide range of sectors from design to fabrication to professional associations. “I also really enjoy the mix of instruction by professors and practitioners from outside the University,” he says.

A course Torrijos recently completed, covering the design of mechanically stabilized earth walls, was co-taught by Dow Leshchinsky, professor in UD’s Department of Civil and Environmental Engineering, and Jim Collin, a professional engineer who has been involved with the design and construction of hundreds of reinforced soil slopes and retaining walls. Leshchinsky brings to the classroom not only vast knowledge of geosynthetic rein-

Photo by Ambre Alexander

DEVELOPMENT CLEARANCE: Photo by Ambre Alexander

DelDOT employees continue learning through Engineering Outreach
By Diane Kukich

UD provides training for Delaware Department of Transportation engineers. Photo by Ambre Alexander
forced slopes and walls but also perspectives gained in the courtroom, where he is frequently called as an expert witness. Many of the short courses assist DelDOT engineers with implementation of codes developed by the American Association of State Highway and Transportation Officials. Other offerings address a broad range of topics from technical writing to project management and engineering economics. Outreach also offers professionals the opportunity to earn graduate degrees part-time through evening classes and courses offered on CD-ROM and the Web. DelDOT engineer Steve Sisson completed a master’s in applied science through Outreach in 2008. He credits the program with keeping him on track and DelDOT with encouraging him to continue his education. “Outreach provides courses directly related to the work we do,” he says. “That experience is invaluable for both young and seasoned engineers alike. The field is constantly changing, and we need a reliable resource to keep us up to speed. “For a young engineer, the structure and course selection provide a sure path to passing the P.E. [professional engineer] exam. I really can’t say enough good things about the program.”

Distance learning offers a great opportunity for those who wish to continue their education but can’t attend classes on a traditional college campus because of their geographic location, family or work schedule, or personal responsibilities. More than 150 different University of Delaware courses are available to take through distance learning. UD Online courses have the same requirements as their on-campus counterparts, and there is no distinction on transcripts or diplomas between on-campus and distance courses. Distance learning capitalizes on available technology to create a flexible, realistic, and accessible learning environment, a virtual classroom. Course materials and lectures are accessible to students whenever and wherever needed, at home, in the workplace, even while traveling. Internet and communications technology allows real-time communication between faculty and students via e-mail and chatrooms. Countless study resources and online library materials can be available 24 hours a day.

At the University of Delaware, there is a real UD professor teaching every online course, every semester. The University’s distinguished faculty includes internationally known scientists, authors and teachers, and many of them teach UD Online courses. UD Online’s distance learning courses may include all or some of the following instructional delivery methods: video streamed class lectures, video clips, audio components, guided readings, chatrooms, interactive Web activities, and threaded discussions. In addition, instructors are available to assist students according to their course policy either in person, via e-mail, or by phone. A small number of courses require scheduled virtual class meetings using a microphone and headset, videocconferencing, or are completely self-directed. UD Online courses are regular University credit courses, and are listed on a college transcript with no distinction from on-campus courses; only the delivery format is different. "I can tell you that the UD Online students are getting exactly the same version of the course as the in-class students, and they’re responsible for the same information and learning that the on-campus students are,” explains one UD Online instructor. Additionally, the UD Online staff is committed to helping students and faculty become successful participants and is readily available for assistance.

The University of Delaware has been offering distance learning courses since 1988 and is a national leader in the use of educational technology. Numerous awards recognize the University’s electronic campus and its achievements in technology and distance learning.
Problem

a weighty

Chickens dieting to help Delaware’s waterways by Tracey Bryant

According to recent analyses by David Hansen, UD assistant professor of soil and environmental quality, there are now about 19 pounds of phosphorus in a ton of Delaware poultry litter compared to 25 to 30 pounds of phosphorus per ton of litter just five years ago. The 30–40 percent reduction is credited to phytase-modified diets and other nutrient management practices adopted by poultry farmers under Delaware’s Nutrient Management Law of 1999. That reduction means that the phosphorus load to the environment has been reduced by some 2 million to 3 million pounds per year.

“Phosphorus is essential to all life,” Saylor said. “Livestock, particularly poultry and swine, are fed a diet of seeds and grains. However, two-thirds of the phosphorus in this food is phytic acid or phytate, which is a form of phosphorus that poultry and pigs can’t digest, so it goes right through them.

“Phytase is an enzyme that is added to poultry feed at the mill that helps broilers and other poultry utilize more indigestible phosphorus.”

Over the past several years, Saylor and his students formulated various phytase-modified diets for a series of studies involving thousands of broiler chickens. The birds were examined for bone health and growth, as well as the phosphorus content of their manure, beginning as chicks up to market-size birds.

The painstaking research defined the boundary at which the total phosphorus levels in a broiler chicken’s corn-soybean meal diet can be reduced without detriment to the birds’ health, as well as the percentage of phytase that can be added to the feed to allow the birds to digest more phosphorus, leaving less to literally “go to waste.”

The data have been shared with a nutrient management partnership involving the poultry industry, environmental regulators and the academic community.

“It certainly factors into our decision-making process,” Dr. Ted Miller, director of nutrition and research at Mountaire Farms Inc., in Selbyville, said of UD’s phytase research.

The company, which has 600 growers across the Eastern Shore, who produce 150 million broiler chickens a year.
Miller serves on an advisory committee in UD’s College of Agriculture and Natural Resources and meets regularly with UD and Maryland scientists as an industry cooperator.

“Phytase has been at the nucleus of industry cooperation and regulations to deal with nutrients,” William Rohrer Jr., administrator of the Delaware Nutrient Management Program, said. “It has significantly reduced the phosphorus going into our waterways.

“The University’s phytase research has provided two critical things. It’s brought the science to the table and helped industry take advantage of the enzyme. It’s also helped us to quantify the reduction of phosphorus to the environment.”

William Vanderwende, chairperson of the state’s Nutrient Management Commission, said he has been contacted by several states that want to model their nutrient management programs after Delaware’s.

“Our poultry industry in Delaware is basically surrounded by water, and because of its size and concentration, environmental issues are of great concern.”

— William Saylor

While he does not raise poultry, Vanderwende operates a dairy farm near Bridgeville, with 700 dairy cows and 3,000 acres of crops.

“All in all, these phytase diets are doing the job,” Vanderwende said. “And I know these scientists are working to see if they can get the phosphorus numbers even lower.”

Saylor has been interested in animal nutrition since he was a boy growing up in Butler County, Pa. He “always had animals,” including rabbits, sheep and chickens.

After high school, he headed to Penn State, where he received his bachelor’s degree in dairy science, master’s degree in animal nutrition and then a doctorate in poultry nutrition.

“Our poultry industry in Delaware is basically surrounded by water, and because of its size and concentration, environmental issues are of great concern.”

— William Saylor

Nutrient management and UD: More than 30 years of cooperation

For more than 30 years, the University of Delaware has conducted basic and applied research about nutrient management. Over the past 10 years, UD has worked extensively with the Delaware Nutrient Management Commission and its partners to implement research based recommendations for Delaware agriculture.

Faculty and staff conduct research and demonstration projects on nutrient management practices, provide technical recommendations to the Delaware Nutrient Management Commission, and provide certification training for nutrient generators, private and commercial handlers, and consultants.

Research scientists conduct field evaluations of improved nutrient management practices that can reduce nutrient loss and improve crop production efficiency, many have been conducted under “on-farm” conditions with cooperating farmers.

Environmental “fate and transport” studies examine the effect of nutrient management practices on soil and water quality and the safety of our food chain.

Watershed scale projects that have a more holistic perspective, attempt to integrate socio-economic factors into the nutrient management planning process.

Scientists also investigate the basic chemical and physical reactions that control nutrient availability and losses to air and waters. These studies have had the goal of providing the fundamental understanding of nutrient interactions with soils and waters that must underlie any truly effective “best management practices.”

University of Delaware Cooperative Extension is responsible for offering the majority of initial certification and continuing education classes for the Nutrient Management Commission.

Cooperative Extension began offering nutrient management certification classes in January of 2001. These courses address topics ranging from water quality and nutrient cycling to the specifics of the Delaware Nutrient Management Act.

Since 2001, more than 2,600 individuals have attended nutrient management certification classes. Maintaining certification requires continuing education. Since February 2004, there have been more than 260 different continuing education programs offering more than 700 credits.
The notion of babies driving robots sounds like it came fresh from a cartoon series but it is actually the focus of important and innovative research being conducted at the University of Delaware that could have significant repercussions for the cognitive development of infants with special needs.

Two UD researchers – James C. (Cole) Galloway, associate professor of physical therapy, and Sunil Agrawal, professor of mechanical engineering – have outfitted kid-size robots to provide mobility to children who are unable to fully explore the world on their own.

The work is important because much of infant development, both of the brain and behavior, emerges from the thousands of experiences each day that arise as babies independently move and explore their world. This is the concept of “embodied development,” Galloway said.

Infants with spina bifida, Down Syndrome, cerebral palsy, autism and other neurological and orthopedic disorders can have mobility limitations that disconnect them from the ongoing exploration that their peers enjoy.

“If these infants were adults, therapists would have options of assistive technology such as power wheelchairs,” Galloway said. “Currently, children with significant mobility impairments are not offered power mobility until they are 5-6 years of age, or older. This delay in mobility is particularly disturbing when you consider the rapid brain development during infancy. Their actions, feelings and thinking all shape their own brains through their exploration and learning in the complex world.”

When a baby starts crawling and walking, everything changes for everyone involved. “Now consider the negative impact of a half decade of immobility for an infant with already delayed development,” Galloway said. “When a baby doesn’t crawl or walk, everything also changes. Immobility changes the infant, and the family. Given the need, you would think that the barriers to providing power mobility must be insurmountable. In fact, the primary barriers are safety, and the lack of a baby-sized mobility device.” Therapists and parents fear a young child in a power wheelchair might mistakenly go the wrong way, drive over the family pet or destroy the living room. Galloway said. “Your parents didn’t wait until you followed their every command before they let you walk – they held your hand, they required you to stay near them and alerted you to obstacles in your way. This is the way infants learn real world navigation, and it is exactly these safety features that are being built into our mobile robot. Our goal from the start has been to design devices with robotics specifically to increase safety as well as aid learning – so babies can get on the go.”

“Our first prototype, affectionately called UD1, was designed with smart technology that addresses each of these safety issues so that infants have the opportunity to be a part of the real world environment,” Agrawal said.

The tiny robot is ringed with sensors that can determine the obstacle-free roaming space, and will either allow infants to bump obstacles or will take control from the infant and drive around the obstacle itself.

The next prototype, UD2, will build on the current technology to provide additional control to a parent, teacher or other supervising adult. The team also is working with power wheelchairs.

“In this way, we can bind technology and human need together to remove barriers for movement in the environment,” Agrawal said.

Galloway knew no one had ever tried using robots with babies – early experiments show that seven-month-olds can learn to operate the simple joystick controls – and he is passionate about the possible benefits to children with special needs of even younger ages.

“Infants with limited mobility play in one location while their peers or siblings go off for adventures all over the room or playground,” Galloway said. “With the robot, they become the center of attention because their classmates want to try it. We predict that this increased social interaction alone will provide an important boost in their cognitive development.”

The idea sprang from a parking lot conversation in which Agrawal approached Galloway, who he knew of Agrawal’s successes with rehabilitation robotics for adults but admitted to being anti-robot for pediatric rehabilitation at first. Galloway was convinced otherwise within minutes of...
The University of Delaware’s Associate in Arts degree is now available through UD Online distance learning, with courses delivered via the Web, CD-ROM and DVD. This program gives returning adult students the freedom to pursue a University of Delaware degree even if their schedules or geographic location prevent them from attending class on campus.

This degree program is a great way to get started toward earning a bachelor’s degree, resulting in a resume-building University credential.

The Associate in Arts Online is based on the curriculum of the University of Delaware’s Associate in Arts degree, a two-year liberal arts program. The curriculum builds enhanced communication skills, including such broad skills as the ability to analyze issues and think critically – traits valued by any employer and useful in pursuing further education in any field.

Previously earned college credits may be eligible for transfer into the Associate in Arts Online program. Participants do not need to be admitted into the program in order to begin taking courses. In fact, taking a few courses before applying for admission is often a beneficial way to determine if the program is a good fit.

This online program is a result of cooperation between UD Online distance learning and the University’s academic departments to develop the courses needed for this degree. On-campus lectures have been filmed in specially equipped studio classrooms, and students in the UD Online sections will see and hear actual faculty lectures, review class notes and link to related resources online.

Other Web-based classes are developed and delivered entirely on the Internet through text, guided readings, interactive Web activities, online research projects and online threaded class discussion. E-mail, discussion forums and telephone office hours keep professors and students in touch.

UD Online courses are regular University credit courses, and are listed on a college transcript with no distinction from on-campus courses, except that they have been adapted for a distance learning format.

The University of Delaware has been offering distance learning courses since 1988 and is a national leader in the use of educational technology. More than 150 University courses are already available through distance learning.

Two specific courses were developed recently which enable the Associate in Arts to be offered completely online. UD Online teamed up with the University’s Department of Foreign Languages and Literatures to develop online Spanish courses with a live Web-based lab component. In addition to online learning activities and independent course assignments, a weekly online meeting time enables students and instructor to meet in real time for discussion and pronounciation practice.

Computer speakers, microphone and special online communication software create a virtual online language lab which can be accessed from anywhere.

To make a science class with lab available to distance learning students, the Department of Geology offers GEOL 105 Geological Hazards and Their Human Impact and its accompanying lab as a Web-based course.

To begin the Associate in Arts Online, students should seek academic advisement through the ACCESS Center, so that their curriculum can be tailored to their own academic goals. However, students can begin taking classes before applying for formal admission. Academic and career counseling, and evaluation of any previous college coursework, are free services of the ACCESS Center.

Associate in Arts degree available through distance learning

by Nora Riehl Zelluk

UD1 robot developers, Rosu Urru, Sumit Agrawal, professor of physical therapy, and Ji-Chul Ryu, a doctoral candidate in UD’s Department of Mechanical Engineering.

His first visit to Agrawal’s laboratory: “When I saw his little robots, it was easy to envision a baby driv- ing one,” he said. “We knew from our previous work that newly reaching infants could use a joystick to control a distant toy. This and other research strongly suggested that very young infants could be trained in real world navigation. It was a special feeling to see a potential solution to a really serious health-care gap for young kids. There was and still is a special tingle we think of the not so distant future.”

Thus, UD1 was born. The researchers and graduate students took UD1 to the UD Early Learning Center, which has a wide range of infants, a gymnasium for initial training on the robot and a varied outdoor landscape to use as a test track.

“It was a relief when we saw that the children quickly learned to use the joystick,” Agrawal said. “If they had just sat there or cried, it would have been back to the drawing board. But over time we have seen them gradually increase their time with the robot and the amount of distance they cover.”

The current goal is to produce a small fleet of custom-built robots (UD2) and then place them with special needs infants in communities throughout Delaware and to gather data to analyze how they are used and what the children learn so that the research team can continue to make modifications.

Both researchers note that Delaware, with its mix of urban, rural and suburban communities, is a model state for a clinical project such as this. “For a real world mobility device to emerge, we have to build it for exploring the real world experienced by infants and their families, and then rigorously study its performance in that world. These devices must be light and small but tough and ready to safely go indoors and outdoors. These will be kid-tested and mom-approved by partnering with Delaware kids and families in Delaware communities,” Galloway said.

In addition to providing special needs infants with mobility, this project will significantly expand researchers understanding of young infants’ learning capacity and provide a model for tracking the development of real world exploration with laboratory quality data.

They believe the training, robot design and new technology derived from the project will provide the foundation for the first generation of safe, smart vehicles for infants born with mobility impairments.

Galloway emphasized that “the custom UD2 devices must be light enough for moms to stow in a car trunk, and robust enough for babies to use in the home, yard and playground, and maybe even the beach. Although they may look fun, with a Barbie or Batman or NASCAR outer shell, UD2 must be a rough and tough member of the family able to stand up to how families with kids live, that is, in constant motion!”

This interdisciplinary project is bringing together students and researchers from fields that have had little or no interaction: engineering, early childhood education and pediatric therapy.

“The research, educational and health care impact is particularly exciting, given the critical nature of early development, the relatively short time to prepare special needs infants to enter mainstream education and the complete lack of power mobility early in life,” Galloway said. “This project has so many positives, and is of interest to so many in the community. We are encouraging everyone interested in special needs infants to get involved – from parents to policymakers. We are thinking locally and globally at the same time. We still have plenty of barriers that must be eliminated before all special needs infants have the opportunity for full mobility. In addition to engineering and training barriers, there are financial, political and social barriers. We are inviting all Delawareans to help us shape the future of special needs infants and their families.”
During its NCAA Division I-AA national championship football season in 2003, the University of Delaware Fighting Blue Hens enjoyed stellar performances on both sides of the ball from two former teammates at Cape Henlopen High School.

Helping the Hens finish 15-1 with a resounding 40-0 win over Colgate in the national championship game at Chattanooga, Tenn., were offensive left tackle Nicholas Pasqua “Trip” DelCampo, of Rehoboth Beach, and linebacker Mark Moore, of Lewes.

An exercise physiology major with a minor in economics, DelCampo was a football and track standout for the Cape Henlopen Vikings, where he started for two years as a two-way lineman for coaches George Glenn and Brian Donahue.

“My dad, Nick DelCampo, is an alum who played football at UD, and he also took me up to Newark to watch the Blue Hens,” DelCampo says. “With these memories of coming to the games as a kid and playing football in high school, I always wanted to play at Delaware.”

Before playing for UD Head Football Coach K.C. Keeler, DelCampo started his football career as a Blue Hen under College Football Hall of Fame member Harold “Tubby” Raymond as a backup offensive tackle during the 2001 season.

One of the major differences between high school and college football is the amount of time and effort required, DelCampo says. “The level of commitment is intense, especially in the summer, where practices and meetings can run from six in the morning until nine at night. Also the competition is much greater, because when you get to college, you find the players are all fast and they are all strong.”

DelCampo, who was named third team All-Atlantic 10 Conference, said playing for the 2003 national championship team was a great experience that also shaped the way he looks at life beyond the gridiron and the college campus.

“I had a wonderful experience at UD, and I owe a lot of that to football,” DelCampo says. “That 2003 season shaped my outlook on life. I’m convinced that no team in the nation worked harder than we did, both during the off-season and the regular season. To put in the effort and be rewarded for it, that is really something.”

Currently a third-year student at the University of Bridgeport (Conn.) College of Chiropractic, DelCampo says he eventually hopes to set up a practice in the Lewes-Rehoboth area, where he says the Blue Hen connection in Southern Delaware remains strong.

“In any given Saturday during football season, you will see cars with Blue Hen stickers heading from downtown state up to Newark,” DelCampo says. “There has always been strong support for UD teams among the Sussex County community.”

While DelCampo was busy anchoring the left side of the offensive line, Lewes native Mark Moore was a first-year starter at outside linebacker and part of a defensive unit that held the opposition to 15.4 points per game.

“It was just a really cool thing to be part of a team that had that type of chemistry and with the leadership of people like Mike Adams,” Moore says. “Everybody held each other accountable, and the chemistry that existed was something that you really can’t explain.”

Games that stand out for Moore during the 2003 season include wins over Navy and the University of Massachusetts, and a loss on the road against North-eastern.

“To beat Navy in a thriller and see all of the history in Annapolis was great, and to get that triple-overtime win over UMass was really something,” Moore says. “Losing the away game against North-eastern late in the season (Nov. 8) really humbled us. It brought us back to reality and made us realize we weren’t invincible. We just went to work from there.”

Moore says that being a student-athlete at UD involves as much commitment in the classroom as it does on the practice and playing fields.

“At UD they stress academics first,” Moore says. “The football program in particular, and athletics in general, seemed to provide more and more support academically while I was there.”

As a biology education major, Moore said his favorite class was taught by David Smith, a professor of biology who “could make even microbial ecology seem really interesting.”

Like many Blue Hen alumni, family and friends from Southern Delaware, it was with a family member that Moore saw his first football game at Delaware Stadium.

“My uncle Paul Jones played for UD in the early 1970s, and his brother Rick took me to a game when I was in junior high school,” Moore says. “I was in awe of the whole atmosphere.”

Moore says that the connection between Blue Hen football and UD alumni in Southern Delaware remains strong, as evidenced in March 2006 by the number of fans who turned out for UD’s first-ever Sussex County Blue-White spring scrimmage at Cape Henlopen High.

“Rep. Joseph Booth (Republican-37th District) held an event where he invited Coach K.C. Keeler to speak,” Moore says. “Things like this and the fact that the scrimmage was held at Cape Henlopen shows that UD football has tried to maintain its close connection with the people in Southern Delaware.”

Having a lot of former Blue Hens living in Southern Delaware also helps maintain the popularity of what many consider to be one of the top sporting experiences in the First State, Moore says.

“People rally around the Blue Hens like people from Philly rally around the Eagles,” Moore says. “For sports fans, UD football is probably the biggest thing going on in Delaware.”

De Campo (72) blocks a player from Southern Illinois during a 2003 NCAA tournament win. Photo by Eric Crossan
William B. Chandler III, the chancellor of the Delaware Court of Chancery, grew up and still lives in Dagsboro.

Chandler was appointed chancellor of the Delaware Court of Chancery in 1997, where he had served as vice chancellor since 1989. He also served as resident judge of the Delaware Superior Court from 1985 to 1989.

Chandler received his law degrees from the University of South Carolina School of Law and the Yale Law School and his undergraduate degree from the University of Delaware in 1973.

Before his appointment to the court, Chancellor Chandler was an associate with the firm of Morris, Nichols, Arsht & Tunnell and he served as legal counsel to former Gov. Pete du Pont.

Chandler also taught commercial law, legislative process and remedies for two years at the University of Alabama School of Law. He is presently a member of the American Law Institute and the Delaware Bar Association.

In addition, Chandler is a trustee of the John L. Weinberg Center for Corporate Governance in the University of Delaware’s Lerner College of Business and Economics, a board member of the Yale Law School Corporate Governance Center and a member of the National Academy of Business Court Judges.

Chandler’s wife, Gayle, received her bachelor’s degree from UD in 1973.
Their two children also are UD alumni, with their son, Will, graduating magna cum laude in December 2006 and their daughter, Melody, graduating in May 2009.

While delivering the keynote speech during a day-long conference, “Creating a Livable Delaware: Pathways for Enhancing Prosperity and Quality of Life,” in March, 2008, at the University’s Newark campus, Chandler described the rapid population growth in Sussex County, which he said was “a special place” to him, as an example of the challenges facing the state. “Since 1950, when the population of Sussex Coun-

Rapid population growth is a problem being faced by Sussex County, where even small towns like Dagsboro are coping with issues of housing density, worsening traffic congestion, noise and air pollution.

ty was 61,336 people—that’s half the land area of the state for just 60,000 folks—life in Sussex County and in all of Delaware has fundamentally changed and, in many ways, not for the better. The fields and woods across which I tramped and the open space I savored have fallen to tract housing, as a huge influx of retirees and tax refugees have sought a place ‘in the country’ or ‘at the beach.’”

“The Delaware I was born into had a population of just slightly over 300,000 people: More than 100,000 in Wilmington, around 100,000 in the rest of New Castle [County] and less than 100,000 in all of Kent and Sussex counties,” Chandler said.

“The population of the three counties today—is quickly approaching 800,000, a near threefold in-crease in my lifetime alone. A state cannot experience such dramatic growth in such a short period of time without feeling some growing pains,” Chandler said.

“This in-migration has driven the cost of housing, even in a slowed real estate market, beyond the ca-pacity of many local people, including my own chil-dren,” Chandler said. “The average cost of a house in Sussex is now $260,000, while incomes average less than $30,000 annually.

“Traditional communities, particularly the small African American waterfront communities that once existed throughout the eastern part of the county, have been uprooted. Middle class children, whose middle class parents owned homes in towns like Lewes or Rehoboth, are unable to afford such properties them-selves. And sadly, many beautiful flatland vistas across long fields of beans and corn fringed by marshland or pine grove are obscured by rows of houses, bulky shopping centers and billboards,” he said.

“L.P. Hartly, in his novel ‘The Go-Between,’ fa-mously wrote that ‘[t]he past is a foreign country.’ Well, the Delaware I grew up in is a foreign coun-try to today’s world of urban planning, skyrocketing property values, and conferences like this one, where strategies to manage growth and to preserve our cul-tural heritage are the challenges to be addressed,” Chandler said.

“Over the past ten years, even the Dagsboro town council, like that of many other small towns, has wrestled with issues of housing density, residential planned communities and open space set aside for new developments, as well as worsening traffic con-gestion, noise and air pollution.”

Chandler said solutions include continued efforts by the state to purchase and preserve open spaces, the purchase of development rights, stricter zoning laws and a moratorium on new developments until infra-structure needs are satisfied.

Chandler said the current credit freeze and hous-ing market slowdown in Delaware acts as a de facto moratorium on development, which offers state and local officials a perfect opportunity to implement some of his suggestions, “they are truly seriously about preserving the quality of life in this small state.”

Chandler also recommended reassessment of prop-erty values for tax purposes to close the “tax vacuum,” as well as pooling some or all transfer tax revenue into a trust fund for the preservation of open spaces through the purchase of development rights. He said that new developments should require the ap-proval of local, county and state authorities to ensure the involvement of all parties that would be affected. New developments, he said, should either be approved based on the capacity of the infrastructure or on condition that the developer meets the cost of improving the same.

Chandler also suggested that the responsibility of developing and maintaining roads should be trans-ferred from the state Department of Transportation to local authorities in order to make local authorities more accountable for their development decisions, while traffic from nearby states should be made to pay through electronic toll collection.

The FutureScan project began in 2007 with in-terviews of community leaders, such as city officials, business owners, and key service providers, such as the library and local post office.

Then, in early 2008, a group of more than 50 com-munity leaders from government, housing, transpor-tation, education and the environmental sectors got together to discuss the critical issues facing Lewes.

Next, the FutureScan team turned to Lewes resi-dents for their opinions. The team held public meet-ings in April and June of 2008. The more than 140 residents who attended the meetings had the opportu-nity to react to a series of questions using hand-held polling system devices to record their responses.

On the table during discussions with community leaders as well as citizens were issues such as transport-ation, adequacy and access to services such as the local hospital, affordable housing and jobs. People also had a chance to give their opinions on issues re-lated to annexation, population growth and taxes.

“The Lewes community is fortunate to have many natural and historic features that make it a place of distinction,” Falk says. “The local residents who enjoy the small town quality of life and the visiting tourists who help maintain the economy all appreciate these important assets and

no doubt consider them crucial to the communities’ long term vitality.”

Since gathering information from stakeholders, Falk and his collaborators have created a final report that synthesizes factual information they gathered along with the community input. Based on that information, the report names nine action items and issues that should be addressed for public and private action. Among those projects are protecting open space, improving transportation and creating a plan to address the city’s ability to conserve resources and improve environmental well-being with regard to climate change.

Those action items together with the report will influence the next planning step for Lewes. That phase will involve working with a community planning firm that will recommend the housing units, commercial square footage, jobs, basic services, road network, open space, and other amenities needed for the city’s growing population.

FutureScan was supported by the Delaware River and Bay Authority, and additional support has been provided from Delaware Sea Grant and the University of Delaware’s Coastal Community Enhancement Initiative.

Circus theme a winner in Lewes Lighted Boat Parade

A mouse, a fortune teller, and even a ringmaster were part of the University of Delaware College of Marine and Earth Studies’ winning entry in the Lewes Lighted Boat Parade held Oct. 4, 2008, on the Lewes Canal front.

The parade was sponsored by the Lewes Chamber of Commerce and was part of its annual Boast the Coast Festival. Each year, the Lewes Chamber and the College of Marine and Earth Studies (CMES) team up to hold Maritime Festival Weekend, which includes Boast the Coast as well as Coast Day, sponsored by CMES and Delaware Sea Grant. The parade traditionally takes place on the first Saturday evening of October, and Coast Day, a celebration of Delaware’s coastal resources, is held the next day at UD’s Hugh R. Sharp Campus in Lewes.

The 2008 CMES team, which dressed up the University of Delaware’s 30-foot Research Vessel Donna M as “CMES Under the Big Top,” took first place in the 25-foot and over powerboat class. A team of circus elephants (toys strung along the bow) led the ship down the canal as circus music played and each character on board played his or her part—a weight lifter pumped iron and a dancer shook her hips.

The college has participated in the parade each year since its inception in 1996 and has had great success. The 2007 entry won first in the same class, with students aboard the 26-foot RV Captain White dressed as 1920s-style gangsters and flappers.

Other themes have included a haunted pirate ship and the Dutch ship De Walvis in celebration of Lewes’ 375th anniversary. In 2005, CMES Dean Nancy Targett was the parade’s grand marshal.

“(The parade) is in keeping with the town spirit,” said Assistant Director of Marine Operations Captain Art Sundberg, assistant director of design for the Delaware Department of Transportation (DelDOT). The new bridge will be outfitted with a long-term structural health monitoring (SHM) system, which will be installed by a research team affiliated with the University of Delaware’s Center for Innovative Bridge Engineering (CIBrE) in collaboration with DelDOT.

Michael Chajes, dean of UD’s College of Engineering and professor of civil and environmental en-
The new bridge over the Indian River Inlet will be outfitted with a long-term structural health monitoring system, which will be installed by a University of Delaware research team.

Michael Bailey

A critical link

The new bridge over the Indian River Inlet will be outfitted with a long-term structural health monitoring system, which will be installed by a University of Delaware research team.

The University of Delaware’s Master of Arts in Liberal Studies, or MALS program, could just as easily stand for Mature Adults Learning Society because it is centered on graduate students of all ages and interests who seriously want to further their education and knowledge in a variety of disciplines.

Classes are offered in the University of Delaware’s Academic Center in Georgetown, as well as in Newark and Wilmington.

“MALS students are truly a learning community,” says Joan DiFattore, director of MALS and professor of English. “The students are a joy to teach because they are interested and engaged and enrolled in the program because they want to be there. In fact, there is list of faculty who have asked to teach in the MALS program because it is stimulating, gratifying and fun.”

The students are of all ages, from their 20s to their 70s and older, and come from a variety of backgrounds, according to DiFattore, who has been teaching MALS students for many years.

Some are retirees pursuing new interests and some are in professions, such as teaching, where a master’s degree furthers their careers.

After finishing their coursework, MALS students complete the program by writing a thesis or doing a project on topics that are meaningful to them, DiFattore says. The topics are wide-ranging, from a book for children by a pediatric nurse, a documentary on women in a shelter, the environmental impact of White Clay Creek, the social impact of African American churches, and the history and detailed analysis of a World War II plane.

An example of a MALS course is the innovative class offered in Georgetown last semester, “Shakespeare in Performance,” team taught by Anne Colwell, associate professor of English, and Jim Keegan, assistant professor of English, who also is a resident actor at the American Shakespeare Center in Staunton, Va.

It was a “page and stage” collaboration, the professors said.

The class did far more than read the Bard’s plays – they were immersed in them. Colwell gave lectures and the historical background and significance of the plays, and Keegan focused on acting and theatre. Since Keegan was performing in four plays – as King Lear, Sir Toby Belch in Twelfth Night, the Duke of York in Richard II and Pompey in Measure for Measure – the class focused their attention on these plays, studying them in depth.

After the lectures in Georgetown, the class traveled to attend performances of the play at the American Shakespeare Center in Virginia. The theatre has a modern exterior, but the interior is a replica of the Black Friars Theatre, constructed in consultation with the Globe Theatre in London, giving the audience a feeling of how the plays were performed in Shakespeare’s time, Keegan said.

The MALS students also had behind-the-scenes tours, workshops, talks with the actors and attended actors’ classes.

Seth and Samantha Buford, high school teachers in Sussex County, had praise for the MALS program and the Shakespeare course. Noting that the MALS program is an excellent choice for students in Sussex County, the Bufords say MALS is “flexible, exciting” and “challenging,” adding the director “strives to create a community of learners whose needs and desires are met” and the professors “design courses that are exercises in intellect.”

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IPA provides planning services to local governments

An array of planning services, including assistance in the development of comprehensive plans, are provided to Southern Delaware municipalities by the University of Delaware’s Institute for Public Administration (IPA) in the College of Human Services, Education and Public Policy.

During the past decade, IPA has assisted many towns in Southern Delaware develop or update their comprehensive plans, including Lewes, Henlopen Acres, Dewey Beach, Millsboro, Bethany Beach, Frankford, Dagsboro, Blades, Georgetown and Bridgeville.

Additionally, IPA has provided other planning services, including the development of planning maps, to Milton, Rehoboth, Millville, Ocean View and Delmar.

In 2008, IPA worked with the Greater Georgetown Chamber of Commerce and the town of Georgetown, along with the staff of the UD’s Small Business Development Center in Georgetown, to develop the “Greater Georgetown Area Comprehensive Market Analysis.”

The report should provide the Chamber and the town a tool to enhance the economic vitality of this area in Southern Delaware.

The IPA Planning Services Team combines the professional planning experience and research skills of its staff with the resources of the University of Delaware to provide services to municipalities.

Having served at all levels of state, county and local government, the Planning Services Team members offer an impressive list of credentials, a variety of experiences and the skills required to address the needs of the state’s municipalities.

Complementing the group’s work is the contribution of the Water Resources Agency, a unit of the IPA, which offers expertise in watershed planning, computer mapping and geographic information system (GIS) development.

Services include the development of comprehensive plans for municipalities, assistance with transportation planning, help with the resolution of water and wastewater issues, training on the comprehensive planning process and the administration of land-use regulations, reviews of government services and mapping assistant with the use of GIS for the purposes of local government planning.

IPA planning partners include state agencies such as the Department of Transportation, the Department of Natural Resources and Environmental Control and the State Office of Management and Budget.

Southern Delaware municipalities interested in working with the IPA Planning Services Team can contact the office in Newark at (302) 831-8971 or the office in Lewes at (302) 645-4353.

“Most towns in Delaware do not have personnel with land-use planning experience,” Martin Wollaston, IPA planning services manager, says. “IPA has delivered direct staff assistance to many of these towns to address their current needs for town plans or ordinance revisions. Additionally, IPA continues to provide professional training opportunities to strengthen the planning knowledge of the elected and appointed leaders in these towns.”

More information is available on the Web site at www.ipa.udel.edu.
King Crop Insurance began in 1967 when Reese King learned of an opportunity with the Federal Crop Insurance Corporation out of Washington, DC. He and his wife Catherine decided to open the first crop insurance agency in Sussex County. It started in an office on a 100 acre farm they owned in Laurel, DE. Reese began the business serving neighbors and a network of farmers he knew in the county with a strong belief in the future of crop insurance. In 1972 Reese died and Catherine decided to continue with the business. She often brought her two youngest daughters along with her when visiting area farms. Jackie learned the business from the ground up answering phones, stuffing envelopes, filing and eagerly doing any task delegated. Jackie knew she wanted to stay involved in farming. She graduated from the University of Delaware majoring in Agriculture. After graduation Jackie worked for a regional crop insurance office in Winston-Salem, NC. In 1987 she returned to Delaware and entered the family business as a partner with Catherine. Catherine retired in 2003 after 36 years of working with crop insurance. King Crop Insurance, Inc. has expanded and now serves the entire state of Delaware. 2006, Jackie invited her sister Nancy to join her in the family business. Over the years the crop insurance program has added more insurable crops, additional plans, and levels of coverage. With the financial uncertainties and volatilities facing today’s farmer, crop insurance is more important than ever. The USDA’s federal crop insurance program continues to offer a risk management tool to farmers which can be specifically tailored to the farmer’s individual needs. Crop insurance enables farmers to borrow money to expand and improve their businesses by providing lenders the assurance that farmers will have sufficient economic security to repay loans. It also provides the security that enables farmers to forward market their crops to take advantage of market opportunities. Without a strong crop insurance program, uncontrollable changes in weather could undermine the financial security of individual farmers and place the entire farm economy in jeopardy. King Crop Insurance started in 1967 with a strong belief in the future of crop insurance and continues to believe in the value of the program. The center, which opened in 2007 in partnership with the Delaware Department of Education, makes it possible to coordinate common professional goals across multiple districts and helps to create partnerships for specific goals, such as implementing the new science curriculum. The center itself is part of the UD College of Arts and Sciences’ Center for Secondary Teacher Education. HUDSON said the center, based in Georgetown, is working with middle and high schools in the Caesar Rodney, Delmar, Indian River, Laurel, Lake Forest, Seaford and Woodbridge school districts, and has programs with the Milford and Smyrna districts, as well. “We have been getting a very positive reception from teachers and administrators,” Hudson says. The center’s team of specialists is based at the University of Delaware Carvel Research and Education Center in Georgetown, and programs are offered in close collaboration with the Mathematics and Science Education Resource Center, the Delaware Center for Teacher Education and Delaware Academy of School Leadership, all in the University of Delaware’s College of Human Services, Education and Public Policy.
University of Delaware researchers are using a variety of equipment to keep watch on the Delaware beaches, including this rooftop array.

Coastal engineer gets creative in monitoring beach processes

By Diane Kukich

SOUTHERN DELAWARE IS HOME TO 24 MILES OF coastline along the Atlantic Ocean, which attracts more than 5 million visitors every year. The beaches not only play a tremendous role in the State’s tourism industry but also serve as a vital physical barrier between the sea and developed areas.

Agencies such as Delaware’s Department of Natural Resources and Environmental Control (DNREC) employ a variety of monitoring and mitigation strategies to protect this valuable but fragile natural resource.

Jack Paleo, assistant professor in the Department of Civil and Environmental Engineering at the University of Delaware, is contributing to this effort by conducting research on nearshore processes—including wave dynamics, current dynamics, and sediment transport—all of which can contribute to such detrimental phenomena as beach erosion, scour, and the formation of rip currents.

Paleo uses an array of advanced imaging techniques that enable changes in the beach over time to be quantified. He is employing some unconventional means to collect the images, including a video-based remote sensing system installed on the roof of the Henlopen Hotel, a jet ski loaded with high-tech equipment, and, soon, a blimp that may be equipped with LIDAR (Light Detection And Ranging) equipment.

Known as SANDCAM (Surf And Nearshore Dynamics CAMera), the surveillance equipment on the hotel roof is based on pioneering technology developed by Prof. Rob Holman at Oregon State University, who advised Paleo’s master’s thesis. Similar equipment is in place at Bethany Beach and is used by Prof. James Kirby to monitor rip currents.

“The approach uses a set of cameras, which are positioned on a tower or other high point and connected to a computer. The cameras take snapshots, time exposures, and variance images that are sent to the computer for storage in a database and further processing. The pictures can be rectified and rotated so that the image appears to have been taken from above and then merged to create a panorama. “Together, these images enable us to quickly see what is happening at any point in the day over six kilometers of shoreline,” Paleo says. “The work is...
The Southern Delaware Academy of Lifelong Learning was established in 1989 by the University of Delaware as an opportunity for people of retirement age to create and participate in a unique continuing education experience in the southern part of the state. The organization is celebrating its 20th year in spring 2009.

The Southern Delaware Academy of Lifelong Learning is open to all participants 50 years of age or older, and the spouses and partners of members at any age. Classes are held at the Lewes School and other locations in Lewes and Rehoboth Beach. There are no academic requirements for enrollment.

Member-created programs are the key ingredient. The Southern Delaware Academy of Lifelong Learning enables its members to further their intellectual curiosity, to express themselves, and to gain experiences in a friendly, cooperative atmosphere among contemporaries. Members are encouraged to offer new course ideas, design and teach courses in their areas of interest, and serve as committee members. Or members can simply enroll for the semester, taking as many courses as they wish.

Instructors are all fellow Academy members and include both active and retired professionals in their fields, and expert hobbyists. In the “Great Decisions” course, participants can discuss and learn about international affairs topics with fellow Southern Delaware Academy of Lifelong Learning member Robert Duncan, whose background includes a master’s of public administration degree from the John F. Kennedy School of Government at Harvard University and more than 33 years’ experience as a U.S. Foreign Service officer.

“I joined SDALL in early 1995 to take a foreign policy seminar and was immediately impressed with not only the variety and depth of experience of the members, but also how pleasant and committed they were,” says outgoing Southern Delaware Academy of Lifelong Learning program coordinator Bill Sharkey. “Later on I joined the staff as program coordinator. I have been able to see the Academy grow to 430 members, with an average offering of about 50 courses per semester.”

In addition to enrolling in an unlimited number of Academy courses each semester, members may also audit one University of Delaware credit course per semester, participate in Academy-sponsored trips, obtain dial-up access to e-mail and Internet, and join the Academy’s computer user group meetings.

The Southern Delaware Academy of Lifelong Learning is located in Lewes. Some art classes are offered at the Rehoboth Art League in Rehoboth.
They fan out, young and old, traveling by foot, car and boat to bays, beaches and marshes throughout Sussex County.

They’re driven by different motives – wanting safe water in which to swim, clean shellfish to eat, a healthy environment for their kids and grandkids, even an explanation for a persistent stench near a backyard pier.

Unpolluted beaches, safe seafood, and healthy ecosystems have something in common: clean water. The volunteers participating in the University of Delaware’s Citizen Monitoring Program not only recognize the need for clean water; they’re working for it.

Since 1991, citizen volunteers throughout Southern Delaware’s coastal region have been visiting assigned monitoring sites and collecting data on important water quality characteristics. Their measurements give scientists and resource managers a clearer picture of the health of coastal waters and the trend information needed to understand and manage the ecosystem.

The program is based in Lewes and managed by the Delaware Sea Grant College Program, which falls under the administrative umbrella of the University’s College of Marine and Earth Studies (CMES). The college provides the Citizen Monitoring Program with its own laboratory space and access to sample processing and analytic equipment.

Over the years, the volunteers also have developed close working relationships with college faculty, lab coordinators, research associates and students who, despite their own commitments, are regularly willing to lend a hand, offer seminars on proper data collection and share research results on related topics.

The college benefits as well. Since the primary purpose of the program is to develop well-rounded marine research scientists, educators and managers, the opportunity to be involved with the Citizen Monitoring Program has enriched student education and experiences.
In addition to the college and Delaware Sea Grant, the program is supported by several organizations, including the Center for the Inland Bays, U.S. Environmental Protection Agency, Delaware Estuary Program, National Fish and Wildlife Foundation, local communities, and the Delaware Department of Natural Resources and Environmental Control (DNREC). DNREC is the program’s primary data user and funder.

Volunteer water quality data has become an important part in assessing the health of our nation’s streams, lakes, rivers and coastal waters. The state of Delaware was one of the first to fully embrace the idea of having trained volunteers help government agencies keep tabs on the safety of its waterways. Others have followed suit and with the latest economic downturn, it’s reasonable to assume that state agencies will continue to supplement their own water quality monitoring efforts with those of volunteer programs.

“Our citizen monitors are key components in the state’s water quality monitoring program,” says program manager Joe Farrell. “Government and university scientists can’t be everywhere. The volunteers allow us to collect more data, more frequently, and over a broader area.”

As a result, scientists and resource managers are better able to identify and respond to potential water quality problems. In 2007, for example, Citizen Monitoring Program staff and volunteers detected phytoplankton resembling the Florida red tide dinoflagellate, Karenia spp., in water samples collected just inside Indian River Inlet. While Karenia is fairly common on Florida’s Gulf Coast, this was the first time it had been detected north of Cape Hatteras, N.C.

Phytoplankton growing in great numbers, known as blooms, can be of concern depending on the species involved. For example, blooms of one particular Karenia species, Karenia brevis, have been associated with shellfish toxicity, massive fish kills, and human respiratory irritation from aerosolized toxins.

Program coordinator Ed Whereat notified DNREC, and the Citizen Monitoring Program – with DNREC support – continued to monitor the blooms over the next two weeks. Working with regional colleagues, they confirmed the presence of two Karenia species, including K. brevis, but detected very low or no levels of toxin.

“Government and university scientists can’t be everywhere. The volunteers allow us to collect more data, more frequently, and over a broader area.” — Joe Farrell

Southern Delaware alumni club has enthusiastic leader

♦ ♦ ♦

The newly revitalized Kent & Sussex Counties Alumni Club has a lot of things going for it — the large number of UD alumni living and working in southern Delaware, for example, and their proximity to the Newark campus. It also has Steven Waidley.

Waidley, a 1999 University graduate who recently was named the club’s president, has high hopes for the group, and he believes his own enthusiasm and experience will inspire other alumni to reconnect with UD.

Growing up in an Air Force family, Waidley lived all over the world before moving to Dover where he finished high school and now has settled. He says he feels a commitment to the community and to his alma mater.

“As soon as I got to UD as a student, I got so much encouragement and did so well,” Waidley says. “I’ve always wanted to stay involved and to give back, so when I saw that the Kent & Sussex club was becoming active again, I volunteered to help.”

Like other UD alumni clubs, the group has been restructured with the establishment of a board, which supports the president and includes such positions as vice president and chairpersons for special events, young alumni and communications.

“Everyone has been excited that we’re getting this club active again, and they’re eager to reconnect,” he says. “Our plans are to meet regularly, and to alternate our meetings between the two counties so that no one has to drive very far each time, and to get involved in some community activities so that we’re doing more than just getting together to have a good time.”

Waidley, who works in the financial services business, says his own volunteer work for various community agencies has been meaningful to him, and he believes other alumni will be interested in helping the club choose some service projects in which members can participate.

For more information about the club and its activities, or to volunteer for a position on the board, see the Web site www.UDConnection.com/Kent-Sussex or call UD’s Office of Alumni Relations, (302) 831-2341.
University plans Forum & Reunion Weekend June 5-7

STAY UP LATE TALKING WITH YOUR friends. Join the party at Mug Night. Go for a morning run. Attend a show on campus. Oh, and learn a few things, too.

If these sound like some of your favorite memories from your student years at the University of Delaware—and if you’ve ever wished you could relive them—plan to return to campus for the 2009 Forum & Reunion Weekend, June 5-7.

That’s when the University hosts its first-ever “Dela-bration,” a one-of-a-kind party for alumni and friends to celebrate the things that make UD distinctive and engender such loyalty among Blue Hens. And if you haven’t been back for a while, you may be surprised to see how much the University has changed since your student days, even if they were only a few years ago.

From Friday evening through Sunday morning, the weekend will be an occasion to reconnect with old friends and faculty members, to revisit the campus and the town and to enjoy a full slate of activities and class reunions.

A variety of special programs and events will combine intellectual discovery with entertainment, recreation and fun. The weekend will provide alumni with the chance to talk with their former professors, network with one another and learn firsthand about some of the changes on campus. It will include family-friendly activities and will coincide with a community festival, Newark Night on Main Street, Saturday evening, June 6.

“All of our planning for Forum & Reunion Weekend is designed to offer a variety of exciting and fun activities for our alumni, faculty and friends,” says Cindy Campanella, director of alumni relations. “We think everyone who attends will enjoy this unique opportunity to stay in touch, get involved and be inspired.”

As planning for the weekend’s complete program continues, many events already have been scheduled. These include a Dela-bration Mug Night on The Green—featuring live music, food, drink and a commemorative mug—and family-friendly “ghost tours” of campus exploring UD’s haunted history.

Outstanding alumni awards ceremonies will be held by the Lerner College of Business and Economics and the College of Human Services, Education and Public Policy.

Saturday will kick off with a Blue Hen 5K run/walk and 1K fun run for kids, followed by distinguished speakers, a town hall meeting with UD President Pat Harker, an international foods picnic and a series of engaging UD showcases presented by the seven colleges, University Libraries, Athletics and Admissions.

The showcases are designed to highlight some of the University’s and faculty members’ areas of expertise, while providing entertaining and useful information. Topics include caring for family photos, conducting your own genealogical research, an insider’s look at the college admissions process, retirement planning, health assessments and sustainable home landscaping.

In other showcases, visitors can take part in an interactive game testing their environmental knowledge, take a guided tour of campus history or “trade” stocks in the Exelon Trading Center, a high-tech simulated trading floor used as a lab by UD business students.

Saturday will conclude with gatherings of the reunion classes of 1959, 1984, 1999 and 2004, as well as entertainment and an all-alumni tent party on The Green.

For information about lodging, updates to the schedule or to register to attend, visit UDconnection.com/ReunionWeekend, or call (302) 831-2341.
Your top resource for dining, shopping and entertainment in The First State — in print and now online:
delawaretoday.com
Heritage tourism offers new avenues for economic development in Sussex County

By Beth Chajes

Sussex County’s tourism industry has long been centered on the beaches and resort towns of the coast. However, recent population, real estate and tourism trends have resulted in new development burgeoning toward the west, more tourists, and more year-around residents and off-season visitors. Taking advantage of these trends, while controlling the potential damage to the cultural character and environment of Sussex posed by increased tourism, is the focus of a movement toward heritage tourism among Sussex County’s historical societies and tourism organizations, facilitated by the University of Delaware.

Heritage tourism has dual goals — to protect and sustain delicate and threatened cultural, historical and natural resources, while enhancing the regional economy.

In 2007, UD’s Coastal Community Enhancement Initiative, a cooperative partnership among the colleges of Marine and Earth Studies, Agriculture and Natural Resources, and Human Services, Education and Public Policy, funded a study to determine the feasibility of heritage tourism as an economic development strategy in Sussex County.

Conducted jointly by the Center for Historic Architecture and Design (CHAD) and the Institute for Public Administration (IPA), two research and service centers housed in the College of Human Services, Education and Public Policy, the study recommended that Sussex County tourism efforts be organized along thematic “trails” that can direct tourists to sites across the county that match their interests.

For example, a maritime history trail could connect coastal Lewes with the historic shipbuilding center of Bethel, and the Nanticoke River town of Seaford. Printed guides would map out routes between destinations and showcase historic sites and stops that could be worked into itineraries for interested travelers.

Other potential themes include agricultural history, coastal defense, and wildlife viewing.

“Protecting fragile resources while promoting tourism may seem incompatible at times,” says David L. Ames, professor of urban affairs and public policy and director of CHAD. “Heritage tourism, however, views the cultural, historic and natural contexts of a place as the reason for the development of a tourism industry in the first place, and it would be counterproductive not to protect those assets that form the ‘raw material’ for the industry. As a county rich in these assets, and with a long tradition of openness to tourists, Sussex is well placed to take advantage of this economic development strategy.”

For homeowners and farmers alike, the cost of energy from traditional sources and the impact of these sources on the environment are a growing concern. Poultry producers, who grow and sell over 250 million broiler chickens each year, must address rising feed prices, environmental compatibility issues, and global export challenges. Poultry producers must look for new ways to keep their costs at a minimum.

With energy costs seen as one of the biggest challenges facing poultry producers today, in 2007 the University of Delaware—in conjunction with numerous project partners—installed a 42 kilowatt solar energy collection system on an Allen Family Foods poultry farm near Laurel.

The project will determine the economics of installing, operating, and maintaining solar cells as a source of power for poultry houses and will define and guide legislation that may be necessary to make this technology practical and viable.

Poultry houses are highly energy dependent in that chickens must be kept at carefully controlled temperatures with appropriate ventilation. Energy costs are generally borne by the growers, who are independent operators contracted by poultry companies to raise day-old chicks to maturity.

Charles C. “Chick” Allen III, chief executive officer of Allen Family Foods and a UD alumnus, offered the use of a company-owned farm in Laurel for the pilot study. “We work with 50 independent contractors on Delmarva who raise our chicks,” Allen said. “I was happy to have the opportunity to collaborate on a research project that has the potential to reduce costs for these growers. I want to...
Solar panels help provide power to support broiler chicken production in Southern Delaware. Photos courtesy of the College of Agriculture and Natural Resources.

SOLAR FOR SAVINGS

Solar Energy for Broiler Chicken

To learn more about Harnessing Solar Energy for Broiler Chicken Production, visit the Web site http://ag.udel.edu/anfs/solar/index.html.

SUNY FOR SAVINGS

A perfect fit

Delaware proves great place for high-achieving Sussex students

BY ANN MANSER

for Sussex County residents Kathryn (Kate) LaPrad and Bruce Aldred, choosing a college was an especially big decision. High-achieving students with ambitious academic plans, they had plenty of options, but both ended up selecting the University of Delaware. And, they say, they’re certain it was the right choice.

“The University was the first school I looked at, and it really stood out a lot for the value it had to offer, especially for Delaware residents,” says Aldred, a fresh- man biological sciences major from Lewes and a graduate of Cape Henlopen High School, who’s considering going on to either medical school or a career in research.

“I found that it’s on a par with a lot of extremely good schools, and then the opportunity to apply for the Honors Program convinced me it was right for me. When I got the scholarship, it really became unbeatable.”

Aldred won a Eugene duPont Memorial Distinguished Scholars award from UD, a highly selective, academic scholarship covering the cost of tuition, room, board and textbooks, as well as providing a one-time grant for an enrichment activity. In addition to receiving full financial support, duPont Scholars participate in a variety of events on campus, encourage intellectual thought by organizing an annual lecture series and plan monthly social and cultural activities to foster a sense of community.

LaPrad, of Seaford, says she was accepted by 10 colleges after graduating from Seaford High School and turned down such prestigious universities as Harvard to come to UD. “And I’ve never regretted it,” she says.

As an undergraduate with a double major in art and history, LaPrad also was a duPont Scholar, as well as an Allison Scholar—one of 10 students in each class so honored for their strong interests and abilities in liberal arts.

When she graduated in 2007, she received the Emaeal Pusey Warner Award as the outstanding senior woman, then spent a year working at the Plimoth Plantation museum in Massachusetts before returning to the University to enroll in the graduate Winterthur Program in American Material Culture.

“One of the reasons I came to the University of Delaware was that I was interested in the material culture studies program,” she says. “I saw all the opportunities and the resources, like Winterthur [Museum and Country Estate], that were available even to undergraduates, and I saw a lot of excitement among professors and students here.”

Today, as LaPrad explores possible topics for her master’s degree thesis — it will focus on some aspect of museum work. She’s had experience in grant-writing and would like to focus on that aspect of museum work.

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Today, as LaPrad explores possible topics for her master’s degree thesis — it will focus on some aspect of Southern Delaware, she says — she is planning for an eventual career in the business of arts institutions.

At Plimoth Plantation, she says, she gained some experience in grant-writing and would like to focus on that aspect of museum work. “The Winterthur Program usually trains curators, so the career path I’m looking at is a bit unusual,” says LaPrad, who is considering a second master’s
degree in business administration, in the future. “But I wanted to get that first-class arts education before I go on to pursue the business side.”

While an undergraduate, she worked as a peer mentor for freshmen in the University’s Associate in Arts Degree Program at the Georgetown campus of Delaware Technical and Community College. The program offers Delaware high school graduates the opportunity to complete two years of coursework at a UD Academic Center on a Delaware Tech campus, positioning them to complete their bachelor’s degree in two more years.

LaPrad says she was happy to be an ambassador for UD in Sussex County and to encourage students there to finish their studies on the Newark campus. She also sometimes felt like an ambassador for Sussex County to northern Delaware students, explaining how much the southern part of the state has to offer. “I spent my whole life in Seaford and in the Seaford public schools,” she says. “The community was very good to me.”

Aldred says he also encourages Southern Delaware students to think of UD as “a unique opportunity” to live away from the immediate area where they attended high school but still have the advantage of in-state tuition rates. On top of that, he says, the University offers top-quality academics and such other opportunities as study abroad and undergraduate research.

“New Castle County is definitely different from Sussex—different geography, much less rural—so you do feel that you’re ‘going away to college,’ which is the experience that a lot of my friends in high school wanted,” Aldred says. “And because there are more people in northern Delaware, you get more cultural opportunities on campus and nearby, so that was a nice change for me also.

“At the same time, you’re not too far away from home. It’s really the best of both worlds.”

UD certificate builds business savvy

For almost any job today, successful candidates will be expected to know the fundamentals of accounting, finance, economics and management. Being a highly effective employee requires convergence in the basic disciplines of business.

Increasingly, employers expect their hires to hit the ground running, and this means a knowledge of economic concepts, familiarity with the vocabulary and standard procedures of business transactions, and financial and budgeting savvy. People who have studied, or are studying, in fields other than business may be missing the fundamental knowledge needed to get jobs they want or move ahead in their chosen fields.

The University of Delaware’s Certificate of Business Essentials provides a solution by helping people become familiar with the fundamentals of business. Not only do students in the certificate build a valuable toolset of business skills, they earn a resume-building University of Delaware credential.

To earn the certificate, candidates complete four UD courses, which are all available via distance learning through UD Online. Online study offers a solution for students who wish to continue their education but whose schedule, geographic location, or personal responsibilities make attending classes the “traditional way” difficult.

Online study means the class is accessible to students whenever and wherever needed — at home, in the workplace, even while traveling. Internet and communications technology allows real-time communication between faculty and students via e-mail and chatrooms. Countless study resources and online library materials can be available 24 hours a day.

The required courses are: Economic Issues and Policies (ECON 100); Survey of Accounting (ACCT 200); Introduction to Business (BUAD 100); and Fundamentals of Finance (FINC 200). At least one course in the certificate will be scheduled each semester, including summer and winter sessions. The Certificate of Business Essentials can be completed in one year.

View upcoming course offerings at the Web site, www.pcs.udel.edu/credit/search.html. For more information about the certificate, contact Continuing Studies Information at 1-866-820-0238 (toll-free), send e-mail to continuing-ed@udel.edu or visit the Web site, www.pcs.udel.edu/essentials.

Natural filters

Oyster gardens grow, boost bay health

From the earliest times, inhabitants of Delaware’s estuaries have realized the value of the oyster fishery here. The Lenape Indians enjoyed eating oysters, leaving vast shell middens along the shore. European settlers also depended on oysters for food. The shells provided building material for homes and roads and fertilizer for farms.

In the 1800s, Delaware’s oyster industry began to thrive.

By 1878, more than 80 Delaware vessels with their hardworking crews sailed the bay from fall to early spring, staying out for a week at a time to harvest the much-savored “Delaware salts” for market.

Unfortunately, by the 1950s, oysters succumbed to overharvesting, habitat destruction and disease. Although the region’s oyster populations today are down to less than 1 percent of historic levels, the Delaware Sea Grant College Program and its partners are working to restore this vital resource to the estuary.

Since 2003, Delaware Sea Grant, the Delaware Center for the Inland Bays and Delaware State University have been working with citizen volunteers to raise baby oysters.

The volunteers put the young oysters, or “spat,” in floating baskets attached to their backyard docks in the maze of lagoons that empty into the state’s inland bays. The volunteers keep the oyster spat clean and protected from predators such as crabs that like to eat them for lunch.

The program now has 120 sites and 170 gardeners, all in Sussex County.

Delaware Sea Grant Aquaculture Specialist John Ewart said the project is helping to further develop...
useful oyster restoration methods. One shining example: Last summer, participants found evidence for the first time since the program’s inception of new oysters occurring naturally in the lagoons — something Ewart attributes to the decision to let the oysters mature in the safety of the lagoon for longer than they previously had.

Ewart added that the program helps to educate the volunteers, who learn that one great benefit of oysters is that they feed by filtering bay water to remove phytoplankton and other particles floating in the water. That means the oysters serve as natural biological filters and help maintain water clarity and quality.

“Volunteers learn about the important ecological role of oysters as filter feeders and the diversity of marine organisms attracted to the floating habitats,” Ewart says. “It’s a wonderful service that the gardeners provide.”

After spending their vulnerable years under the care of the fastidious gardeners, and once they’ve grown to an appropriate size, the oysters are moved to new homes in the Inland Bays — Rehoboth, Indian River and Little Assawoman. There, the oysters make an invaluable contribution toward creating a healthier ecosystem. Their filter-feeding action can be seen — an adult oyster can filter more than 30 gallons of water a day. But also the oysters and the shell clusters they form as they grow on each other provide habitat that attracts communities of small bottom-dwelling organisms like grass shrimp and worms which in turn support populations of crabs, larger fish and other predators.

For Buzz Henifin, a former naval submarine commander who served 29 years before retiring to the Sussex County coast, it’s that increased water quality that helps motivate his involvement. Henifin collects water quality data for the UD Citizen Monitoring Program (for more on that initiative, see page 65) and raises oysters for the Oyster Gardening Program. “I may not live to see cleaner water here,” Henifin says. “But I hope to leave it cleaner for my grandchildren.”

To learn more about Delaware oyster gardening and the ecological contributions of oysters to the health of coastal estuaries, visit the Inland Bays Oyster Gardening Web site at darc.cms.udel.edu/ibog.

Delaware Quality Award offers assessment, recognition for businesses

To survive and thrive in tough economic times, many businesses and organizations will be carefully examining their processes and practices to make sure they’re performing as efficiently as they possibly can. The Delaware Quality Award program can help businesses study their own performance with the goal of helping them find out what they’re doing right, as well as where they need to improve.

As one of 37 state award programs based on the Malcolm Baldrige National Quality Award, the Delaware Quality Award was established in 1992 as a public-private partnership to promote and recognize performance excellence throughout the state.

Administered by the University of Delaware, the top award level is named for W. L. (Bill) Gore for his effort in promoting excellence, innovation and a positive working environment at the company that bears his name.

Delaware Quality Award applicants are evaluated rigorously by an independent board of examiners following the Baldrige Criteria for Performance Excellence, which cover leadership; strategic planning; customer and market focus; measurement, analysis and knowledge management; workforce focus; process management; and results. The evaluation process includes many hours of review per applicant, and on-site visits by a team of examiners.

Bayhealth Medical Center’s Child Care and Early Learning Center is the 2008 recipient of the Delaware Quality Commitment Award. The center opened in 1988 to provide child care services for Bayhealth employees.

For more information about the Delaware Quality Award program, visit the Web site, www.pcs.udel.edu/dqa/.

To learn more about Delaware oyster gardening and the ecological contributions of oysters to the health of coastal estuaries, visit the Inland Bays Oyster Gardening Web site at darc.cms.udel.edu/ibog.
SOUTHERN DELAWARE RESOURCES
A guide to University of Delaware programs and services

UNIVERSITY PROGRAMS
Access Center for Adult Advisement
Academic advising, career counseling and student services for adult students through the University’s Division of Professional and Continuing Studies.
Contact: Mary C. Miller
Phone: (302) 855-1630
E-mail: mcmlldr@udel.edu
www.pcs.udel.edu/access/

Associate in Arts programs
A two-year program in the liberal arts leading to four-year degree opportunities.
Dover: Sharon Tucker
(302) 857-1214
Georgetown: J. Richard Bacon
(302) 855-1630
E-mail: jrbacon@udel.edu
www.udel.edu/associateinarts

Academic Challenge Program for High School Students
A college-school partnership between Sussex County school districts and the Delaware Technical and Community College Owens campus in Georgetown. College courses are provided at the Owens campus through Delaware Tech and the University of Delaware.
Contact: Mary C. Miller
Phone: (302) 855-1630
E-mail: mcmlldr@udel.edu
www.dtic.edu/owens/academic/challenge

Southern Delaware Academy of Lifelong Learning
Established in 1989 by the University of Delaware, the Southern Delaware Academy of Lifelong Learning provides people of retirement age with opportunities for intellectual and cultural exploration.
Contact: Anna Mosher
(302) 645-4111
E-mail: amosher@udel.edu
www.academy.udel.edu/sdall

UD Online distance learning ADVISEMENT ONLY
UD Online is the University of Delaware’s distance learning program, which includes courses, degrees and student services via the web and other distance learning technologies. It is offered through the Division of Professional and Continuing Studies.
Contact: Michelle Parnell
Phone: (302) 831-2741
Email: mparnell@udel.edu
UD Online Office
(302) 831-1053
Toll free: 1-800-597-1444
www.pcs.udel.edu/udonline/

Dual Enrollment for High School Students
Contact: Judith Miller
Phone: (302) 831-3148
E-mail: jmil@udel.edu
www.pcs.udel.edu/udonline/highschools

UNIVERSITY DEGREES AVAILABLE
Associate in Arts/Liberal Arts
The University of Delaware, in cooperation with Delaware Technical and Community College, offers qualified applicants the opportunity to pursue a University of Delaware Associate in Arts degree by taking University of Delaware courses at the UD Academic Centers on the campuses of Delaware Technical and Community College in Dover and Georgetown.
Dover: Renee Fisher
Phone: (302) 857-1214
E-mail: rfisher@udel.edu
Georgetown: Mary C. Miller
Phone: (302) 855-1630
E-mail: mcmlldr@udel.edu
www.udel.edu/associateinarts

Associate in Arts/Liberal Arts/Online
The Associate in Arts degree is now available through UD Online distance learning, with courses delivered via the Web and CD-ROM.
This program gives returning adult students the freedom to pursue the Associate in Arts even if their schedules or geographic location prevent them from attending class on campus.
Contact: Judith Miller
Phone: (302) 831-3148
E-mail: jmil@udel.edu
www.pcs.udel.edu/udonline/aa

Associate in Arts/Education/Georgetown
University of Delaware students can now complete an Associate in Arts Degree with a concentration in elementary teacher education on the Georgetown campus.
Contact: Laura Bert
Phone: (302) 424-6461
E-mail: dbert@udel.edu
www.udel.edu/udonline/elementary/education/georgetown

Bachelor of Science in Nursing for High School Students
Contact: Arleen Berenfield
Phone: 1-800-UOD-NURS
E-mail: aberen@udel.edu
www.udel.edu/DSP/degree programs.htm

Master of Science in Nursing R.N. to M.S.N. Program
Contact: Arleen Berenfield
Phone: 1-800-UOD-NURS
E-mail: aberen@udel.edu
www.udel.edu/DSP/degree programs.htm

• Help coordinating educational programs
• Academic advisement for employees
Contact: George Irvine
Phone: (302) 831-7858
E-mail: girvine@udel.edu
www.pcs.udel.edu/organizations

CULTURAL AND COMMUNITY EVENTS
Southern Delaware Academy of Lifelong learning, Lewes
Contact: Anna Mosher
Phone: (302) 645-4111
E-mail: amosher@udel.edu
www.academy.udel.edu/sdall

University of Delaware Campus Locations

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Southern Delaware Professional Development Center, Carvel Education Building, Lewes Campus, Georgetown, with cooperation from the University of Delaware’s Division of Professional and Continuing Studies, Cooperative Extension, and several College of Agriculture and Natural Resources (CARNR) offices.

Contact: Charles Epifanio
Phone: (302) 856-7303
E-mail: isaacs@udel.edu

Southern Delaware Academy of Lifelong Learning
Established in 1989 by the University of Delaware, the Southern Delaware Academy of Lifelong Learning provides people of retirement age with opportunities for intellectual and cultural exploration.

Contact: Mark Isaacs
Phone: (302) 856-7303
E-mail: isaacs@udel.edu

University of Delaware's Southern Delaware Resources webpage: www.udel.edu/sdall

Contact: Anna Moshier
Phone: (302) 645-4111
E-mail: amoshier@udel.edu

Alumni and University Relations - Dover/Georgetown
Contact: F. Gary Simpson
Phone: (302) 735-8200;
E-mail: gsimpson@udel.edu

www.udel.edu/alumni

Division of Professional and Continuing Studies ACCESS Center, Georgetown ACCESS offers academic and career counseling.
Contact: Mary C. Miller
Phone: (302) 856-1630
E-mail: mcmiller@udel.edu
www.pcs.udel.edu/access

Delaware Small Business Development Center, Georgetown
Contact: William Pfaff
Phone: (302) 856-1555
E-mail: wpfaff@udel.edu
www.delawaresbdc.org

University Services in Kent and Sussex Counties
Division of Professional and Continuing Studies, Access Center for Adult Advisement Academic advisement, career counseling and student services for adult students through the University’s Division of Professional and Continuing Studies.
Contact: Mary C. Miller
Phone: (302) 856-1630
E-mail: mcmiller@udel.edu
www.pcs.udel.edu/access

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Contact: Anna Moshier
Phone: (302) 645-4111
E-mail: amoshier@udel.edu
www.academy.udel.edu/sdall

Agricultural Sciences Cooperative Extension (Dover)
Contact: Doug Crouse
Phone: (302) 730-4000
E-mail: dcrouse@udel.edu
ag.udel.edu/extension/Kent

Agriculture Sciences Cooperative Extension (Georgetown)
Contact: Mark Isaacs
Phone: (302) 856-7303
E-mail: isaacs@udel.edu
www.rec.udel.edu

Virden Conference and Retreat Center Hugh R. Sharp Campus, Lewes Contact: Jay Taylor
Phone: (302) 645-4100
E-mail: hjtaylor@udel.edu
www.udel.edu/conf/lwes/index.html

Institute for Public Administration, College of Human Services, Education and Public Policy (School of Urban Affairs and Public Policy)
Contact: Jerome Lewis
Phone: (302) 831-8971
E-mail: jlewski@udel.edu
www.ipa.udel.edu/ipa/welcome.html

College of Human Services, Education and Public Policy Institute for Public Administration, Water Resources Agency, Lewes Campus
Contact: Nicole M. Minnery
Phone: (302) 645-4353
E-mail: mmnery@udel.edu
www.wra.udel.edu/

Delaware Small Business Development Center, Georgetown (Georgetown)
Contact: William Pfaff
Phone: (302) 856-1555
E-mail: wpfaff@udel.edu
www.delawaresbdc.org

Delaware Sea Grant Marine Advisory Service
Contact: James Falk
Phone: (302) 645-4235
E-mail: jfalk@udel.edu
www.desseagrant.org

Southern Delaware Elementary Teacher Education Program, Milford
Contact: Laura Palmer
Phone: (302) 424-6461
E-mail: lpalmer@udel.edu
www.udel.edu/education/ete/southern/index.html

ARTC - Alternative Routes to Certification (Newark)
Contact: Linda Hughes
Phone: (302) 831-1100
E-mail: artc-de@udel.edu
www.udel.edu/artc

ARTC - Alternative Routes to Certification (Georgetown)
Contact: Judy Cullen
Phone: (302) 855-1632
E-mail: artc-de@udel.edu
www.udel.edu/artc

University of Delaware: Key Information
Admissions
Phone: (302) 831-8123
Fax: (302) 831-6905
E-mail: admissions@udel.edu
admissions.udel.edu

Alumni Relations
Phone: (302) 831-2341
Fax: (302) 831-2045
E-mail: alumni@udel.edu
udconnection.com

Athletics
Phone: (302) 831-2186
E-mail: athletics@udel.edu
www.bluehens.com

Athletics season tickets
Phone: (302) 831-2527
E-mail: athletics@udel.edu
www.bluehens.com

Development
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