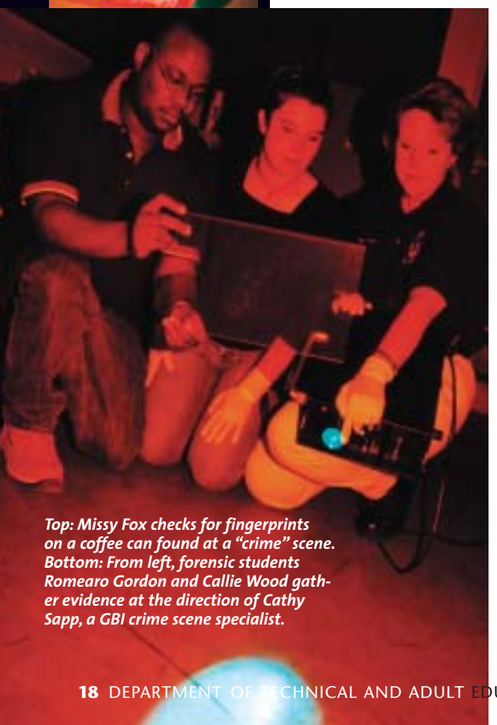
A roundup of unique programs that fit today's changing technologies

Rare COLLECTION

By Lauren Keating



Top: Missy Fox checks for fingerprints on a coffee can found at a "crime" scene. Bottom: From left, forensic students Romearo Gordon and Callie Wood gather evidence at the direction of Cathy Sapp, a GBI crime scene specialist.

EVOLVING FAR BEYOND THEIR ROOTS, today's technical colleges are at the forefront in teaching progressive, technology-oriented fields. Professions that didn't even exist 50 years ago are suddenly critical in today's political, social, business and economic climates. And even established ones must adapt to the ongoing development of new technologies.

In typical fashion, Georgia's technical colleges have responded with educational programs to suit the times. The following stories highlight some of the unique programs offered around the state.

Forensic Science Technology

The room is pitch dark, the crime scene fresh, but Callie Wood is running out of time. There's a suspect on the loose, but he's left something behind — an empty coffee can. She snaps on a pair of rubber gloves and grabs a soft red brush. After dipping the brush in iridescent powder, she twirls it gently against the can.

"We've got to get you twirling faster or we'll be at this crime scene all day," says Cathy Sapp, a crime scene specialist with the Georgia Bureau of Investigations. Suddenly, a fingerprint emerges. Wood beams.

Wood is a student at Ogeechee Technical College's Forensic Science Technology program, the only one in Georgia. "Our goal is to teach students how to identify, collect, preserve and analyze crime scene evidence," says lead instructor Greg Rabeler.

The program offers a broad education in criminal justice, with specialties in crime scene investigation. Graduates can work as crime scene investigators or pursue careers in criminal justice, corrections or law enforcement. Two-year degree, diploma and certificate options are available.

When the program debuted last fall, enrollment far exceeded expectations. "In our first quarter, we had more than 70 students," says Michael Burrell, dean of Ogeechee Tech's Allied Health Department. Experts like Cathy Sapp teach specific skills in the investigations classes. According to Rabeler, up to 20 people can teach one class.

"One reality of 9/11 is an increase of opportunities in local law enforcement, particularly in investigations," says Rabeler. "We are trying to replace some of the expertise that will be drawn into the federal system to deal with terrorism."

Back at the crime scene, the class moves to the next task: scanning the floor for evidence. Sapp introduces students to a Luma-Lite, a $15,000 light the size of a small briefcase that is used to detect blood, hair or fibers. Students sprinkle powder on the floor, put on orange goggles for viewing, turn on the light and examine the floor. Powder clumps to evidence in orange-glowing blobs. Suddenly, Sapp spins and points the Luma-Lite at Wood. "Look at Callie's shirt," she says, which is glowing orange. In her zeal to crack the case, Wood doused herself.

A definite learning moment.

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Veterinary Technology

The basset hound's somber brown eyes are half-closed. When Melanie Parham enters the ICU ward, he perks up, even grinning when she gently rubs his ears, despite the tubes in his nose. Bandages on his back cover recent surgery. "He's a little whiny sometimes when we pick him up because his back hurts," Parham says.

Parham, a student in Athens Technical College's Veterinary Technology program, is completing clinical rotations at UGA's renowned veterinary hospital, thanks to an inventive partnership between Athens Tech and the University of Georgia.

"The most unique feature of this program is the collaborative effort between a DTAE facility and a Board of Regents facility for clinical training," says Dr. Carole Miller, program director.

First-year classroom instruction is offered at Athens Tech. Second-year students complete nine rotations at the teaching hospital.

Founded in 2001, the program received full accreditation last April from the American Veterinary Medical Association. It was created at the request of the Georgia Veterinary Medical Association, which recognized that trained technicians are vital to veterinary practices.

"Medicine becomes more technical every year," says Dr. Tim Montgomery, owner of Dacula Animal Hospital and past president of GVMA. "To be economically productive, veterinarians must have trained technical help with the procedures."

Georgia lacked sufficient qualified technicians, so the GVMA approached Georgia's Technical College System about filling the gap. The first program was created at Gwinnett Tech, which offers clinical rotations with local private practices.

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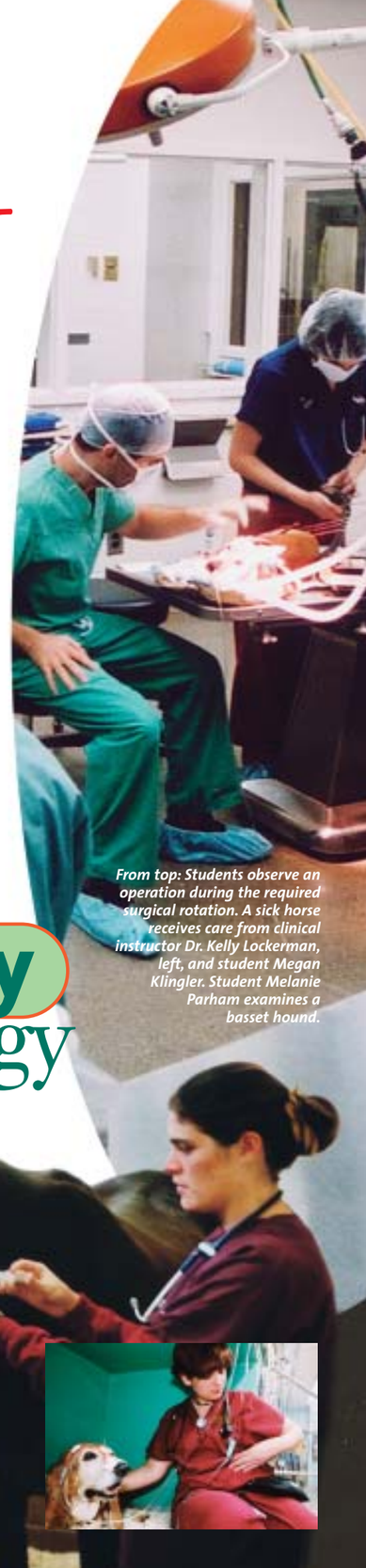

From top: Students observe an operation during the required surgical rotation. A sick horse receives care from clinical instructor Dr. Kelly Lockerman, left, and student Megan Klingler. Student Melanie Parham examines a basset hound.

The job market is robust. "Right now, there are five or six job offers for every veterinary technician who graduates," Montgomery says.

Dr. John Glisson, associate dean for public service and outreach at UGA's College of Veterinary Medicine, also touts the program: "We want to teach our veterinarians to work side by side with technicians from the beginning."

The teaching hospital has a bevy of exotic animals, so students are exposed to more than dogs and cats. On a recent day, students were hustled into a hospital room to view a Loggerhead sea turtle. Parham admits to being "terrified" on her first day in the large-animal ward, but now she's comfortable. "They make it all very easy here," she says.

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WHERE'S THE FIRE?

In addition to East Central Tech, the following schools offer Fire Science Technology programs:

- APPALACHIAN TECH
- DEKALB TECH
- GWINNETT TECH
- LANIER TECH
- MOULTRIE TECH
- SAVANNAH TECH
- WEST GEORGIA TECH

Firefighter training features realistic drills such as extinguishing a car fire, searching smoke-filled buildings and rescuing victims.

FIRE SCIENCE Technology

Flames erupt from a battered gray Ford. Within seconds, firefighter Lee Clements unfurls a fire hose and sidles toward the blaze. Three more firefighters grip the hose and fall in lockstep behind him.

At first, the hose emits a huge half-circle of water, an "umbrella effect" that creates a heat shield for firefighters and cools the atmosphere. Then, Clements narrows the spray to a forceful blast, quelling the flames.

Clements is a four-year veteran of the City of Douglas Fire Department, but he attends East Central Tech's Fire Science Technology program, which debuted in April. The program is unique because the school partnered with the city of Douglas to create a diploma program, which doubles as required refresher training for city firefighters. A two-year degree is also available.

"It's a winning situation for everyone," says Dr. Bonnie Kelly, VP of economic development at East Central Tech. The firefighters attend school while they are working; the school becomes a training source for local government. Previously, Douglas firefighters trained at a state facility in Forsyth, an arrangement that rang up travel costs and time away from the job.

Two individuals ignited this innovative program: Kelly and City of Douglas Fire Chief Tim White. Kelly explored the idea of a fire program for students, and when White became fire chief, he recognized the plan could be adapted for veteran firefighters. Kelly hired White to teach.

Firefighters take classes during their 24-hour shifts, productively filling downtime while they wait for fire alarms. Studies include fire theory, leadership and hazardous materials. The training facility is crammed with props and buildings that can be set ablaze in "controlled burn" scenarios.

The training benefits the entire community, says Dr. Diane Harper, president of East Central Tech. "National and international events have focused on the importance of highly skilled firefighters."

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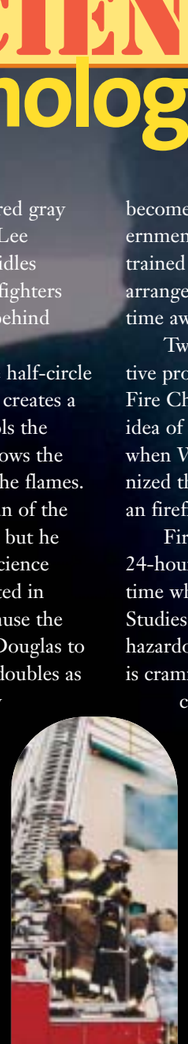

At left and below, student Tim Goss checks the controls on an ammonia refrigeration system.

Ammonia Refrigeration

About 150 years ago, Germans invented a refrigeration technique that used ammonia. Its first application: chilling beer.

Today, the use of ammonia refrigeration is mind-bogglingly widespread. Industries use it to chill everything from produce, seafood and poultry to petrochemicals, pharmaceuticals and, well, beer.

Lanier Technical College is home to Georgia's only ammonia refrigeration program, one of only two in the country. The program was initiated by a partnership between Lanier Tech, The Georgia Institute of Technology and several trade organizations.

So what *is* ammonia refrigeration? Basically, the act of refrigeration changes a liquid into a gas, causing it to absorb heat in the process. Then, the gas is transferred away from the storage facility — along with the heat. Ammonia is a popular liquid used in this process.

Lanier Tech's program offers three one-week courses, which train workers to operate an ammonia refrigeration system and how to respond if the system malfunctions. Lanier Tech and Georgia Tech have had a long-term relationship for cooperative on-site training classes. So when Georgia Tech received a $350,000 grant from Georgia Food Pac, it offered the funds to Lanier Tech to create the program. Also, Lanier Tech is near

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AMMONIA REFRIGERATION
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a concentration of Georgia's poultry companies, which wanted the training.

But the Georgia Tech grant didn't cover all startup costs. DTAE chipped in and Lanier Tech approached private industry, which responded in droves.

"The college took a risk in making its investment in this program," says Dr. Mike Moye, president of Lanier Tech. "We were not alone, though, with the private sector matching our funds on a three-to-one basis."

In addition, the International Institute of Ammonia Refrigeration and the Refrigerating Engineers and Technicians Association donated training materials and books.

Founded in March 2002, the program's popularity has soared. More than 50 companies in 20 states have sent employees to be trained at Lanier Tech. "We just got a major contract with Wal-Mart," says Russell Vandiver, VP of economic development. "They're going to send people from Wal-Mart distribution centers nationwide to be trained here."

Wayne Farms LLC in Pendergrass, Ga., applauds the program. "The real benefit is to get this training early in the career," says Tim Murphy, the company's maintenance and loss prevention and training manager. "It teaches good safety habits."

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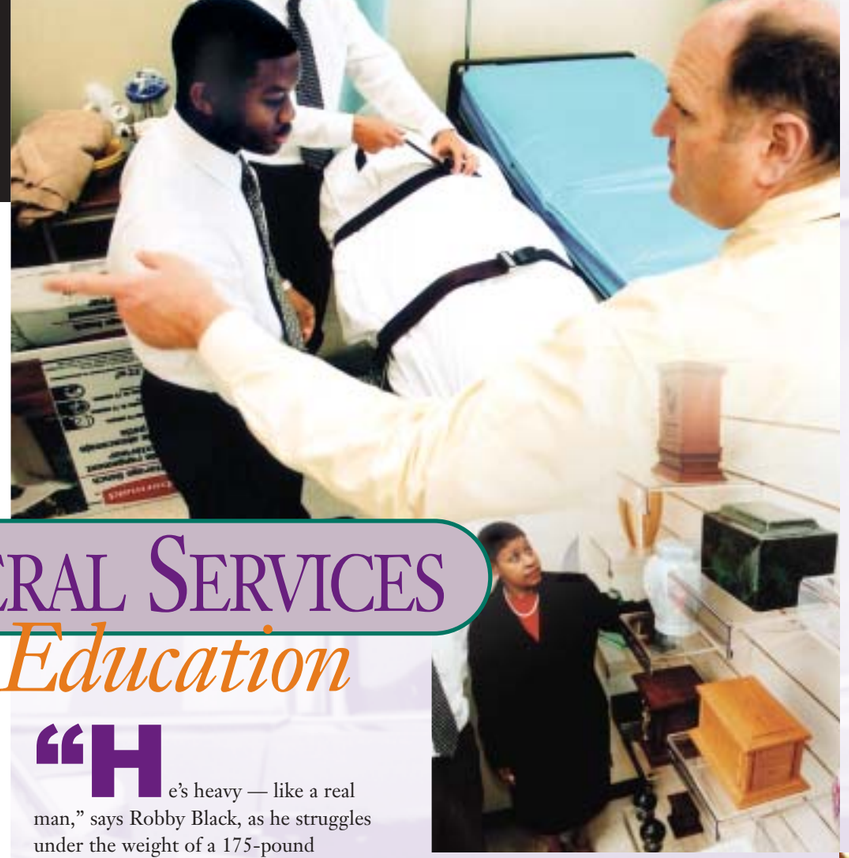
Top: Student Robby Black, left, learns from Barry Turner, clinical director, how to transport a body. Bottom: Jarvis Barnes, program director, explains the different urns on display.



FUNERAL SERVICES *Education*

"He's heavy — like a real man," says Robby Black, as he struggles under the weight of a 175-pound dummy.

Barry Turner, clinical director of Ogeechee Tech's Funeral Services Education program, shows Black and a fellow student how to transport a body from hospital bed to gurney. "Gather the bottom sheet around the body and use it as a hammock," Turner says. "This allows for an easier sliding motion."

Body mechanics is just one component of the Funeral Services Education program. The main classroom contains a mock reception area lined with casket and vault displays so students can practice helping families with funeral arrangements. In the lab, students learn restorative art techniques by applying modeling clay and makeup to plastic skulls.

Ogeechee's program is one of a kind in Georgia. It's the only accredited funeral service program in the public educational system. Prior to the program's debut in April 2001, a private academy in Atlanta offered the sole program in Georgia accredited by the American Board of Funeral Service Education.

"The program provides a financial advantage to students in south Georgia," says Michael Burrell, dean of Ogeechee's Allied Health Department. "They don't have to go to Atlanta and pay tuition at a private academy."

That was a big plus for 2002 graduate Mark Anderson, who owned Joiner-Anderson Funeral Home in Statesboro when he enrolled. By attending Ogeechee's program, he says, "I didn't have to be away from my family and business for 18 months." He says the classroom discussions were "great sounding boards" to enhance his business. "We shared ideas about how they do things at different funeral homes in different towns."

Students learn the embalming process on cadavers donated from local coroner's offices and hospitals. They must complete 12 embalming cases. "Because of our donor program, we have the opportunity to go over and above the board requirements," says Jarvis Barnes, program director.

Most graduates pursue careers in funeral home settings, but they can also work in autopsy labs or morgues or become professional embalmers. There's a national shortage of trained professionals, so the job market is plentiful. In fact, Turner says he receives more requests for trained workers than the school can currently provide.

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Information SECURITY

Picture this: A bank stores $1 million in the lobby. There are no guards and no alarms protecting the money. Crazy, right? Well, as our computer dependence grows, our cyberconnected society gives "more opportunities for the criminal element to steal people's identity or broadcast credit card information," says Susan VanLanen, director of the Information Security program, which debuts this fall at Gwinnett Technical College. It's DTAE's only information security program and will be offered in a certificate, diploma or two-year degree.

Following 9/11, concerns about cyberterrorism swelled. If computer systems are targeted, the results could be epic. "Banks couldn't do business, you couldn't make a purchase in a store, you couldn't buy gasoline— just think of the implications," says Susan Larson, chair of Gwinnett Tech's Computer Information Technology Department.

While serving in the Navy, Larson spent two years at the Pentagon in an intelligence capacity. "I've always been very aware of having secure information, and it probably started at the Pentagon," she says. "This is something I've wanted to see Gwinnett Tech offer."

At Gwinnett Tech, students learn to secure networks, websites and personal computers, as well as build firewalls. Specialized classes include Computer Forensics and Disaster Recovery, filled with techniques for retrieving hidden or lost information.

The high-tech world has suffered a slew of layoffs, but the information security arena is booming. According to the U.S. Bureau of Labor, jobs in information security are projected to grow 36 percent or more by 2010. "The demand for information security skills is phenomenal, and this program is a direct response to the needs of business and industry," says GwinnettTechnical College President Sharon Rigsby.

Also, the school is near a cluster of high-tech companies.

"The industry in Gwinnett will benefit tremendously from the program," says Ellis C. Rainey, manager of the Enterprise Network Operations Center at the Georgia Technology Authority. "It brings back a pool of employees who are security-minded."

Gwinnett Tech's program offers a "solid foundation," according to Jack Sibrizzi, chief technology officer for J. S. Dean & Company, based in Alpharetta. In today's world, he says, protecting information is simply "a cost of doing business." R

Susan VanLanen emphasizes the need for information security training in today's cyberconnected world.