

EASTERN NORTH CAROLINA

Sponsor comments

Since English settlers began sending agricultural goods to Europe 400 years ago, North Carolina has been a global exporter, and eastern North Carolina has played a particularly integral role in that process.

But it's not just goods and services that we send across the country and around the world. Knowledge and people are some of our most important exports, and for more than 100 years, East Carolina University has been at the heart of making the region, state and our people an international economic, service and educational force.

Eastern North Carolina is a leader in life sciences, advanced manufacturing, value-added agriculture and more. ECU is boosting that leadership with initiatives such as the Pharmaceutical Development and Manufacturing Center of Excellence and the new East Carolina Research and Innovation Campus. At ECU, we are working to produce the workers, knowledge and partnerships to fuel the growth of these important economic sectors for the benefit of our region and all of North Carolina.

In doing so, East Carolina University generates more than \$1 billion in economic impact to its surrounding areas and \$2.8 billion across the state, according to a 2015

University of North Carolina system study. We produce professionals for many fields important to our state, such as medicine, dentistry, nursing, teaching, engineering, technology, science, business and the arts.

ECU also helps communities help themselves. Since 2010, our Community and Regional Development program has facilitated \$2.7 million of investments in eastern North Carolina. It has leveraged \$24 million for community projects, established 61 formal community partnerships, completed 32 locally driven development projects and offered 98 Community Capacity Building training sessions.

Looking beyond our borders, each year ECU students and faculty embark on study-abroad trips to underserved regions of Guatemala and Nicaragua to deliver health care and education. Meanwhile, ECU's Global Academic Initiatives unit partners with 62 institutions in 33 countries to provide an interactive, student-driven global experience for approximately 300 students each semester.

For 110 years, East Carolina University has been proud to call eastern North Carolina home. As we commit ourselves to expanding the influence of ECU, our dedication to serving eastern North Carolina remains stronger than ever. Growing the global reach of ECU will contribute to the success of the university, the region and the state.



Handwritten signature of Cecil P. Staton

Dr. Cecil P. Staton
Chancellor of East Carolina University



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High-tech is the hallmark of many companies choosing to locate in eastern North Carolina. Greenville-based Genome ID Group LLC, for example, creates DNA analysis processes for forensics.

Dawn of a new day

Eastern North Carolina is welcoming new businesses with the latest workforce training, improved transportation and expanded Foreign Trade Zones.

Technology-dependent companies are moving to eastern North Carolina. “In recent years, Greenville and eastern North Carolina have successfully competed with the Research Triangle over companies that made a final decision to locate here because ... you could have nearly everything that you have in [Research Triangle Park] but at a considerably lower

cost,” says John Chaffee, president and CEO of Greenville-based economic booster NCEast Alliance. While their executives like those numbers, their human-resources managers are struggling to make others add up.

Washington, D.C.-based U.S Chamber of Commerce says jobs based on science, technology, engineering and math — STEM — are growing twice as fast as



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Creating a STEM workforce starts in middle school. Students, such as these in Havelock, work on projects that range from robotics to using plastics and polymers.

non-STEM jobs. Finding enough skilled workers to keep pace with that trend is a tall order for the region, whose economic strength has always been agriculture. But NCEast has planted seeds across the 24 counties between the Triangle and Atlantic Ocean that it represents in hopes of cultivating a new workforce.

Bruce Middleton worked as a teacher and administrator for schools in Alamance and Orange counties before retiring and moving east. He is putting that experience to work as executive director of NCEast's STEM East program, a position he started in January. Borne from a partnership between industry and public education, he says the STEM learning centers reinvent education. "We are aiming to grow skilled employees

locally, so they can continue to make their careers and homes where they grew up, where they are close to their families and where they enjoy living."

STEM training starts in middle school, where students choose a career path. Then they enroll in learning modules based on real-world situations pulled from current and emerging career opportunities. "Corporate executives are incredibly involved and supportive, both in service to education and through financial contributions," Middleton says. "They offer teachers an opportunity to work at their companies during the summer, when they get workforce experience to take back to their classrooms."

The east's economy is diversifying. It's adding industries, such as biotechnology,

pharmaceutical, renewable energy and advanced manufacturing, while holding tight to its agrarian roots. STEM East is one accommodation that's being made to welcome the additions. It joins upgraded transportation, plentiful renewable and clean energy, and an easier way to get raw materials and finished products in and out of the country. Together they create a bright future for the region, which is still dealing with the flood and wind damage that Hurricane Matthew brought six months ago.

Executives and educators aren't the only ones buying into STEM East. Cleveland Heights, Ohio-based STEM Funders Network is a mix of 20 education-focused private and corporate foundations that support STEM learning ecosystems nationwide, including STEM East. Each brings together schools, community programs, science centers, museums and informal experiences to create learning opportunities. "STEM East has been named one of those 37 ecosystems because of the unique relationship we've built between business and education, and we're proud of that," Middleton says. In 2014, Rocky Mount-based Golden LEAF Foundation, which distributes the state's share of the National Tobacco Settlement for economic-development projects, granted \$1.25 million to a STEM-based program helmed by Greenville-based East Carolina University's Office of Engagement, Innovation and Economic Development. It aims to grow the region's advanced-manufacturing and innovation workforce.

If STEM East is sparking an interest in technology-driven careers among middle-school students, ECU's program is fanning those flames. "eSTEAM is STEM with an 'A' for arts inserted," says Jim Menke, ECU military research liaison and member of the Office of Engagement, Innovation and Economic Development staff. "We believe art and design are the bedrocks of technology and innovation." The program also includes lessons in entrepreneurship. Working closely with STEM East, local economic developers, manufacturing executives and Winterville-based Pitt Community College, ECU has placed 15 eSTEAM studios in middle

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Skilled workers are vital to the Aviation Logistics Center at U.S. Coast Guard Air Station Elizabeth City. They rebuild helicopters, adding the latest technology such as touch-screen controls in the cockpit.

schools in Pitt, Beaufort and Edgecombe counties. In addition to the program for students, eSTEAM offers an Innovators Academy for teachers. About 70 have graduated so far.

ECU's workforce-development efforts also target a group of potential workers that have the work ethic, discipline and skills that employers crave. NCEast estimates 17,000

people transition out of the military each year at the region's bases, which include the Marine Corps' Camp Lejeune in Jacksonville, Seymour Johnson Air Force Base in Goldsboro and U.S. Coast Guard Air Station Elizabeth City. ECU's Operation Re-Entry offers two-week training courses. Participants may earn three national credentials: National Career Readiness Certificate,

Lean/6 Sigma white belt and an Occupational Safety and Health Administration 30 card, which signifies its holder has in-depth safety training, says Menke, who retired from the U.S. Navy. "Operation Re-Entry is a way for us to retain the rich talent pool that comes out of our military. It is a strategic approach to filling gaps in the advanced-manufacturing sector. We've certified over 300 retired military personnel over the last three years."

The military presence also makes the region convenient for defense contractors, who have created a supply chain for the bases. Some of them work hand in hand with the region's aerospace industry. It includes Wichita, Kan.-based Spirit AeroSystems Inc., which assembles parts of wide-body commercial jets at Global TransPark in Kinston.

Chaffee says Operation Re-Entry comes at the perfect time. "We're seeing the effects of the outward growth of the pharmaceutical industry from the Research Triangle area. This is a huge sector, and it's bringing with it a lot of supply-chain companies that support those corporations." Durham-based Patheon is one of the world's largest contract drug manufacturers. It has 26 locations worldwide, including High Point, Durham and Greenville campuses that employ 1,600. It raised \$585 million in an initial public offering in July 2016, and it will spend \$159 million to expand its Greenville plant, which will add about 500 jobs and be online in 2019. Greenville-based Metric Contract Services, a developer and manufacturer serving the pharmaceutical industry, is investing \$3.5 million in a 15,000-square-foot expansion of its stability warehouse that will be complete this year. Its controlled environment protects the drugs that it makes. Its parent company, Australia-based Mayne Pharma Group Ltd., is investing \$80 million to expand capacity and equipment, including 10 analytical labs and formulation-development suites, in Greenville. The two expansions include a commitment to hire 110 scientists, quality assurance specialists and technicians, growing their local workforce by one-third.



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Growth Industry

»» North Carolina is one of the top states for the biotech industry. More than 600 biotech companies call our state home. East Carolina University's strengths in life sciences, medicine, and engineering make it a key industry partner.

Our proposed 150,000-square-foot bioscience-biotechnology center will increase research development funding in our region; help recruit and retain researchers and students; and increase the number of science, technology, engineering, and mathematics (STEM) graduates.

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East Carolina
UNIVERSITY

UNC Health brings big benefits to four small health care providers

Rural community health care providers have a reputation for adding a personal touch to medical services. But lately it hasn't been all smiles on the inside for them. They face growing challenges, including financial pressures and increased demand for care. Almost 80 rural hospitals nationwide have closed their doors since January 2010, according to Chapel Hill-based North Carolina Rural Health Research Program and Policy Analysis Center. Those include Blowing Rock Hospital, Yadkin Valley Community Hospital in Yadkinville and Vidant Pungo Hospital in Belhaven.

It's not any easier for small health care providers in rural eastern North Carolina. Greenville-based East Carolina University's Center for Health Disparities says that death rates from cancers, cardiovascular disease and diabetes in the state's 41 easternmost counties are higher than elsewhere in the state. But four providers there are fighting harder for their patients, increasing capacity, lowering costs and adding access to the latest high-tech care through partnerships with Chapel Hill-based UNC Health Care.

Rocky Mount-based Nash Health Care Systems entered a partnership with UNC in 2013. The five-hospital system considered four other health care systems before joining UNC. "By affiliating with UNC Health Care, we become clinically and financially stronger and better prepared to meet the challenges of the future," Nash President and CEO Larry Chewning said in a statement. Under the agreement, Nash retains financial and operational autonomy, and UNC brings lower costs and more clinical services.

Smithfield-based Johnston Health Services Corp. and UNC created a joint venture in 2014 to operate campuses in Clayton and Smithfield. Its board consists of 11 Johnston and six UNC appointees, according to a news release issued after the deal was complete. UNC paid \$57.6 million for its stake. That money was used to finish a full-service 50-bed hospital in Clayton that opened in 2015. It brings intensive care and maternity services to a rapidly growing corner of the county, says Johnston spokeswoman Suzette Rodriguez. "Expectant mothers can deliver closer to home. In other cases, when a loved one is hospitalized, family members have an easier, more convenient trip to see them."

Lenoir Memorial Hospital offers inpatient, outpatient and preventive health care. It joined UNC last year. "Adding access to UNC's groundbreak-

ing research and focus on advancing clinical care and our commitment to the patients we serve enhances what we can deliver together, close to home," Lenoir President and CEO Gary Black said in a statement.

Wayne Memorial Hospital in Goldsboro is a 316-bed hospital that opened in 1896 and joined UNC in 2015. It's enjoying the cost and care benefits, too, and has taken advantage of one more. Georgia Dees, Wayne's public-relations director, says the staff uses UNC's Carolina Care program. It reinforces the connection between better customer service and improved patient care. "It has been a real eye-opener to many of our nonclinical folks and a great help to our clinical staff, not to mention the patients, who are the reason we come to work every day."

— *Suzanne Wood is a freelance writer from Raleigh.*



PROVIDED BY NASH GENERAL HOSPITAL

Nash Health Care Systems is one eastern North Carolina provider that's finding lower costs and more services through a partnership with UNC Health Care.

One of the great things about living and working in eastern NC is convenient access to the expert care of our UNC Health Care network!



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In addition to pharmaceutical and life-science developments, eastern North Carolina is home to a sophisticated agricultural production industry. The state ranks first nationally in sweet-potato production and second in hogs, pigs and turkeys, according to N.C. Department of Agriculture and Consumer Services. Most of those potatoes and animals are raised in the east, where about 160 businesses are involved in food manufacturing.

Traditional agricultural crops are not the only valuable harvests in eastern North Carolina. Last December, the Agriculture Department's Bioenergy Research Initiative awarded \$1 million in grants for 13 research projects to boost bioenergy opportunities and production statewide. Chemtex International Inc. of Wilmington, which is owned by Italy-based Mossi Ghisolfi Group, expects to begin construction on its \$200 million biofuel factory in Sampson County this year. Chafee says the company will collect locally grown energy crops, agri-

cultural residue and woody biomass before converting them to liquid fuel at the factory, which is scheduled to open in 2019.

The region's energy sector is growing in other ways. The Atlantic Coast Pipeline will carry natural gas about 550 miles, from West Virginia to Robeson County. Its builders — Atlanta-based AGL Resources Inc., Richmond, Va.-based Dominion Resources Inc. and Duke Energy Corp. and its Piedmont Natural Gas Co., both headquartered in Charlotte — expect it to be operational in 2019. It could generate as much as \$1.2 billion in capital investment in North Carolina.

Duke Energy Renewables has 30 solar farms in North Carolina, including six projects in Northampton, Hertford and Edgecombe counties. Those six projects collectively generate enough energy to power 6,000 homes, says Greg Wolf, president of Duke Energy Commercial Portfolio. North Carolina's 2,436 megawatts of installed solar ranked it third in the nation as of December

2015, according to Washington, D.C.-based Solar Energy Industries Association. In 2015, \$1.7 billion was invested on solar installations throughout North Carolina, 159% more than the previous year. "There have been huge investments in solar energy in eastern North Carolina," Chafee says. "Solar farms create tax revenue without creating any demands on the government for services, and that's a huge help for our counties."

Wind power is getting stronger. Amazon Wind Farm in Pasquotank and Perquimans counties generates enough electricity with its 104 turbines to power more than 60,000 homes. Charlottesville, Va.-based Apex Clean Energy is making plans to install a 48-turbine, 300-megawatt wind farm in Chowan and Perquimans counties. Its towers — 599 feet from ground to blade tip — will be the tallest in the U.S.

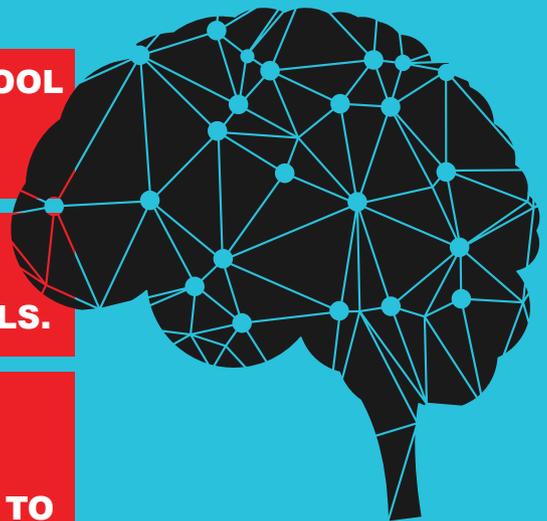
Infrastructure improvements connect the region's expanding economy. "A lot of positive things are taking place to enable us to compete on [more of] a global scale

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STEM EAST connects the private sector, government and community organizations, schools, colleges and universities to further enhance the development of professional teacher-training programs, student learning centers, regional advocacy opportunities, and career pathways that are aligned to existing industry workforce needs.

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than we've ever seen before, even when you look back to the days when river trade was the primary mode of moving product," Chaffee says. Rocky Mount will be home to Jacksonville, Fla.-based CSX Corp.'s \$270 million Carolina Connector, an intermodal terminal where shipping containers will move between rail and road starting in 2020. CCX is expected to be a catalyst for economic growth in the region and state. Manufacturers with access to CCX can move products to Chicago, Atlanta, Florida or the Northeast in one day.

The reorganization of two Foreign Trade Zones brings opportunities beyond deferring, reducing or eliminating duties on imports and exports. The U.S. Foreign Trade Zone Board approved to expand FTZ 214 and FTZ 20 to cover almost every North Carolina county east of Interstate 95. FTZ 214 falls under the more flexible Alternative Site Framework, which streamlines applications for companies. New magnet sites — industrial parks where tenants work under FTZ rules — have been approved, including Radio Island at Port of Morehead City.

The region's legacy businesses and trades, such as tourism, boat building, fishing and farming, are still viable. Many residents travel east to take advantage of these and other opportunities. "We've had companies relocate out of New York to eastern North Carolina because they're big boaters or they love fishing. Many instances, they're retiring early and they want to start a business and live in a small town. That's the appeal of a region like ours."

Chaffee and other promoters of economic development and quality of life in eastern North Carolina continue to strive to change how the region is seen. "The perceptions that have dogged eastern North Carolina for years, including the public's view that all of eastern North Carolina is the same, are not true. It's imperative for all of us to work collectively in getting the message out about the diverse opportunities we have in eastern North Carolina." ■

— Teri Saylor is a freelance writer from Raleigh.

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The Atlantic Coast Pipeline will bring reliable, cleaner, and domestic energy to Eastern North Carolina. And where reliable energy goes, industry follows. The pipeline will give our region the ability to attract energy intensive industries and more. All of this, plus over 4,000 jobs supported during construction, \$1.1 million in annual tax revenue, and \$134 million in average savings on consumers' energy bills.

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