

UNIVERSITY OF DELAWARE

MAGAZINE

Volume 32 • Number 4



**GET YOUR
MOTOR RUNNIN’**

**UD HELPS FUEL THE STATE’S
ECONOMIC ENGINE**

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The cover model—a 2024 Jeep Wrangler 4xe 4-Door Sport S Hybrid—comes courtesy of Charlie and IG Burton, brothers with lifelong roots to the auto industry and the parents to four Blue Hens between them. IG, an 18-year former member of the Board of Trustees who, along with his wife, sponsors a UD scholarship for students studying abroad, didn't attend the University himself but “I feel like I did,” he says. “I've attended Coast Days and football games, and I've spent many weekends on campus. UD does so much for the community. It touches all of Delaware.”

Photo taken at Bombay Hook National Wildlife Refuge by Kathy F. Atkinson

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WORKING TOGETHER FOR A BRIGHT FUTURE IN DELAWARE

With a shared history that stretches back more than 250 years and a limitless future together, the University of Delaware and the state of Delaware are inextricably connected. That relationship is always evolving, strengthening everything we mutually strive to accomplish academically, economically, environmentally and socially.

From Wilmington to Lewes and everywhere in between, the University plays a crucial role in advancing the First State by providing dynamic learning experiences, helping to prepare a qualified workforce, and working with government, nonprofits and businesses to serve the needs of Delawareans.

Educational excellence is at the core of our mission at UD, and we are committed to ensuring that it remains accessible and affordable for students at every stage of their lives. UD has a strong public mission, and we are proud to be the state's flagship university. With state support, philanthropic contributions and industry partnerships, UD offers all qualified Delawareans the opportunity to pursue their educational and career goals, right here, in their home state.

The University also has a long legacy of education, research, innovation and entrepreneurship that drives our state's economy. Our collaborative work with government and industry

stakeholders supports the creation and growth of companies of all sizes. Our classrooms and laboratories, on all our campuses throughout the state, combine UD's world-class academics and research with industry and community partnerships to create jobs, power visionary discoveries and bring ground-breaking technologies to life. Our Cooperative Extension, Delaware Sea Grant, performing arts and K-12 school outreach programs provide communities throughout our state with educational resources and opportunities to enhance their wellbeing and sustainability.

The University is tremendously grateful, too, for the support of our entire state, from entrusting us with the education of the next generation of Delawareans to cheering on our Blue Hen student-athletes in competition.

On behalf of the entire UD community, we are extraordinarily proud of our extensive and enduring relationship with the state of Delaware, and we are honored to be a part of its vital growth and endless potential.

Dennis & Eleni
Dennis and Eleni Assanis, President and First Lady

BY THE NUMBERS



\$100 MILLION

investment by UD and partners in financial technology and scholarship development in the past three years, as well as construction of the FinTech Innovation Hub (learn more on page 22).

\$3.19 BILLION

economic impact in Delaware, meaning the University is connected to

\$1 OUT OF EVERY \$25

circulating in the state's economy

100%

job placement rate for graduates of UD's Teacher Residency Program, which eases Delaware's teacher shortage through a one-year student residency followed by a three-year teaching commitment after graduation



20,000

new, well-paying jobs expected to be created in the region through the Mid-Atlantic Clean Hydrogen Hub (MACH2), a federally funded regional coalition leveraging technology and infrastructure to accelerate the use of clean hydrogen as a carbon-free fuel source. UD leads the higher education component for workforce development, alongside Cheyney University, Rowan University and the University of Pennsylvania.

19%

growth in master's degrees awarded since 2022, with

300+

doctoral degrees awarded in 2023

More than **1,500** people attend the annual UD Botanic Garden plant sale. Proceeds benefit UDBG's year-round horticulture efforts, including a work-based learning program for high school seniors in the Appoquinimink School District.



In less than two years, the Grant Assistant Program (GAP) in UD's Joseph R. Biden, Jr. School of Public Policy and Administration has helped

16

Delaware municipalities secure

\$8.7 MILLION

in infrastructure support. With state funding of \$1.7 million over five years, the GAP initiative works with under-resourced governments and communities to identify potential projects and funding opportunities, such as addressing rail crossings in Georgetown and designing a bike path to connect Milford and Slaughter Beach.



39,000+

undergraduate applications for fall 2024 with a 9.1% increase in applications from Delaware



\$200 MILLION

annual loss from wooden chicken breast syndrome. Researchers in UD's College of Agriculture and Natural Resources have made novel gains in understanding the disease's pathology, with the potential to positively impact the

240 MILLION

broiler chickens raised in Delaware each year, contributing

\$3.5 BILLION

to the state's economy.

14

UD-associated researchers named to the National Academy of Inventors since 2012

89%

increase in undergraduate financial aid between 2017 and 2024



4,000+

scoops of UDairy ice cream served at the 2024 Delaware State Fair



\$5.4 BILLION

economic impact on the Northeast region, supporting more than

35,000 JOBS



90

years of UD's Lab School, which serves as a model for inclusive early childhood education

A Blue Hen WEEKEND IN DELAWARE

BY DIANE STOPYRA

Blue Hen pride extends far beyond the Georgian brick pathways of campus. It's a feeling—an energy—that radiates across the state's 2,489 square miles. From the Piedmont region to the Coastal Plain, UD students, alumni and experts are either managing, contributing to or meaningfully engaging with the businesses and attractions that make Delaware, Delaware.

To strengthen these Blue Hen ties, UD Athletics facilitates mutually beneficial interactions between more than 100 businesses and the University. There are traditional opportunities (think sponsorship deals that result in game-time advertising or social media promos), as well as possibilities less orthodox. Some companies choose to develop community service opportunities or internships specifically geared for student-athletes.

"In larger states with, say, 12 counties, it can be difficult to represent the whole area, but in Delaware, we can get very creative with our partnerships," says Kate Rudolph, associate athletic director, business engagement and philanthropy. "We are privileged with the ability to connect—to be a convener of people and companies—and that's a very cool opportunity."

One avenue is UD's annual 302 tour, in which student-athletes get a chance to meet the people and places that make Delaware hum. In this spirit of forging—and celebrating—connections, *UD Magazine* has put together its own version of the 302 Tour, a weekend itinerary for newcomers and die-hard Delawareans, highlighting Blue Hen ties throughout the state.

Happy road tripping!



FRIDAY

WILMINGTON

12 PM • VISIT A STUNNING MANSION: Cash in some PTO and kick off the weekend early with a visit to Winterthur Museum, Garden and Library, where approximately 20 staff members are UD alumni. The remarkable site boasts more than 90,000 historic and decorative objects that tell the lesser-known parts of American history. A Blue Hen pride point: Winterthur and UD offer two jointly sponsored, world-renowned master's programs in material culture and art conservation—with more than 800 graduates playing critical roles in museums and cultural heritage sites around the world.

2 PM • FUEL UP: Leigh Ann Tona, BE12, launched her food truck, I Don't Give a Fork, after developing the concept at the age of 21 and winning a pitch competition through UD's entrepreneurship program. While that business is no longer operational, the experience gave her confidence to launch Sleeping Bird Coffee, a brick-and-mortar cafe on Miller Road. Before embarking on a whirlwind tour of the state, stop here for some energy. Tona recommends a pastry and a custom caramel latte.

3 PM • FEEL THE BREEZE IN YOUR HAIR: The Kalmar Nyckel, which stands 105 feet high at full mast, is a recreation of a 17th century ship manned by the Swedes who, in 1638, established the first European settlement in the Delaware Valley. Explore this and other parts of Delaware's maritime history at the Copeland Maritime Center on the riverfront, or, during certain times of year, enjoy a public sail along the Christina River (bald eagle sightings at no extra charge). "Even for people like myself who grew up in Wilmington, this offers such a fresh perspective," says Amy Sypher, ANR22, assistant director of public programs and engagement. "Expect beauty, education and adventure."

NEED MORE NATURE? VISIT THE HISTORIC GOODSTAY GARDENS. LOCATED ON UD'S WILMINGTON CAMPUS, IT IS FREE TO THE PUBLIC.



Smell the Roses

Stroll the Marian Coffin Gardens, awe-inspiring not only for their beauty, but their history. The lush grounds were owned in the early 1900s by alumnus, trustee and Sharp Lab and Sharp Campus namesake Hugh Rodney Sharp. He commissioned the trailblazing Marian Coffin to turn the Wilmington space into an "outdoor mansion." (Coffin, the nation's first female landscape architect, is also responsible for the enduring beauty of UD's main campus.) Today, the gardens are owned by the nonprofit Preservation Delaware. Landscape Architecture Professor Anna Wik sits on their board, and UD students and interns have been involved on and off for years.



NEWARK

5:30 PM • EXPLORE A BUSTLING DOWNTOWN:

For a heaping serving of blue-and-gold pride, visit the haunts on Main. Many are owned or managed by Blue Hens: Deer Park, Home Grown and Caffe Gelato. For dinner, consider the flagship location of Iron Hill Brewery, co-owned by Kevin Finn, BE02M, who leveraged his UD education to turn a homebrewing hobby into a beloved chain, now 21 restaurants strong.

9 PM • TURN IN: The Lang Development Group, responsible for more than 30 projects throughout Main Street and Newark, is run by alumni Jeff Lang, BE84; Chris Brown, AS83; and Chris Locke, BE84. In 2023, the company launched the swanky Hyatt Place hotel on Main Street, complete with an indoor pool. "It's important for us to give back to the community we've been so blessed to be part of," says Lang, whose Lang Cares nonprofit benefits area youth. Fun fact: The hotel is managed by former UD football captain, Tyrone Grant.

SATURDAY

6 AM • GET YOUR STEPS IN: Start your day at White Clay Creek State Park, which boasts 25% of the state-park trails in Delaware. Sightings may include Blue Hens—the park's superintendent is alumna Laura Lee, AS92, and professors and students do much work there to remove invasive species, manage the watershed and study wildlife like bats, stink bugs, ticks, butterflies, reptiles, insects and more.

SMYRNA

8:30 AM • EAT A BREAKFAST OF CHAMPIONS: Stop at the family-owned Main Street Market for some eggs or French toast, and look out for Dakota Donaghue, BE27, one of many UD students who've cut their hospitality teeth here. ("We're very selective about who we hire, and Blue Hens are such well-rounded kids," says owner Cathy Shaner.) Hot tip: Order a bagged meal for a picnic in nearby Bombay Hook National Wildlife

Refuge, an important migratory stopover where Blue Hen experts conduct research on waterfowl and songbirds. "When it comes to natural settings that are good for the soul, this is a crown jewel," says Chris Williams, professor of wildlife ecology.

DOVER AREA

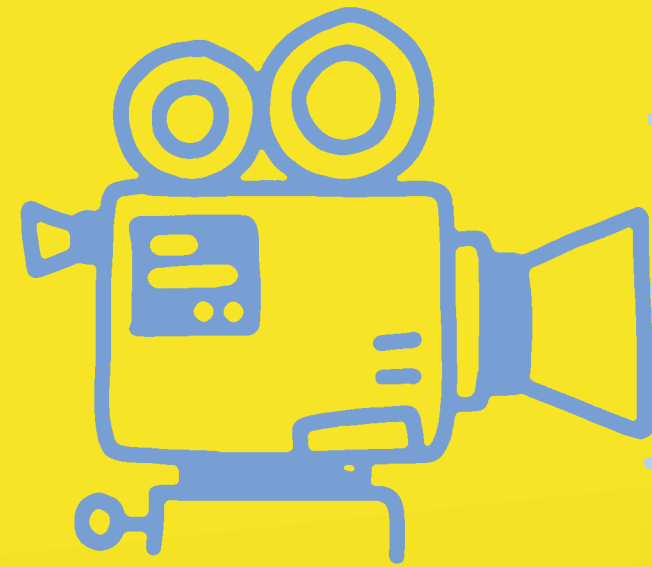
10 AM • EXPERIENCE ART: Alumnus and benefactor Sewell Biggs, AS38, sponsored scholarships for foreign students to study at UD in the mid-1900s. Today, his legacy of advancing education continues at the Biggs Museum of American Art, which houses a sizable collection of fine and decorative pieces from the Delaware Valley. On the first Saturday of every month, UD students Taylor Lipski, AS25A, and Josh Balcena, AS24A, help develop museum programming and serve as tour guides. "The students offer such fresh perspectives," says Kiara Florez, head of visitor experience. "We couldn't do it without them."

11:30 AM • STOP FOR LUNCH: UD alumnus Bob Ashby of the Ashby Hospitality Group, BE77, says he chose an Irish theme for the original McGlynn's Pub because he knew "it would be busy at least one day per year." But he needn't have worried about filling seats—the restaurant's become an institution well beyond St. Patrick's Day. At this location, on the banks of Silver Lake, you can enjoy your wings with a view.

1 PM • SHOP LOCAL: Fifer's Farm, which covers 3,000 acres in central Delaware, allows you to pick your own fruit, shop at a country store, and connect with your inner child (rubber duck races, anyone?). The family operation includes alumni (Mary, HS73, who played on the University's first field hockey team; her brother Carlton, ANR62; and his son Curtis, ANR98), and they do much to support UD's Cooperative Extension and agriculture students.

2:30 PM • PREPARE FOR TAKEOFF: If you've never been inside a restored World War II hangar once used to develop

MIKE PFEIFER, BSPA08, OWNS THE 1440 FILM COMPANY IN WILMINGTON. FOR ONE NATIONAL COMMERCIAL, HE FILMED IN A UD STADIUM AND EMPLOYED UD STUDENT-ATHLETES AS ACTORS.



Bombay Hook National Wildlife Refuge



Biggs Museum of American Art

ENJOYING ONE OF DELAWARE'S 17 STATE PARKS? SHAWN GARVIN, AS89, IS PARTIALLY TO THANK. THE FORMER UD HOCKEY PLAYER AND CURRENT BLUE HEN PARENT IS CABINET SECRETARY FOR THE DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL (DNREC).



PHOTO COURTESY OF FIFER'S FARM

Fifer's Farm

secret rockets, rush to Dover's free Air Mobility Command Museum. Some of the exhibits—from the history of World War II lookout towers to the integration of African Americans in the U.S. Air Force—were created by interns from UD's Department of History. Translation: Up to 130,000 annual visitors are enlightened by Blue Hen research. "The program allows us to foster the future curators of history," says Deputy Director Eric Czerwinski.

MILFORD

5 PM • GRAB A SLICE: Grotto Pizza (with more than 20 locations in Delaware and Maryland) has hosted official watch parties for Blue Hen games, catered UD events and donated to the student-run UDance organization to fight pediatric cancer. Alumnus KC Fry, AS05, has worked there since 2001 as everything from cook to manager to guy hiring 120 new employees each season. "People wonder how my degrees in history and international relations relate to the pizza business," he says. "At UD, I learned how to manage a heavy workload!"

LEWES

9 PM • SLEEP UNDER THE STARS: Cape Henlopen State Park, at the mouth of the Delaware Bay, allows for hiking, fishing, exploring a maritime forest and climbing a World War II lookout tower. Year-round, take advantage of tent sites or cabins complete with fire rings for cooking, gathering and storytelling. Have you heard the one about the UD marine science students who've conducted horseshoe crab studies here?



SUNDAY

8:30 AM • CARB-LOAD: Stop by the family-owned Surf Bagel restaurant for a traditional breakfast or—what else?—the Blue Hen sandwich: chicken salad with bacon and tomato on an Old Bay bagel. Marketing Manager Katie Frederick, AS22, recommends taking your meal to go. Try nearby Herring Point for a chance to see surfers in action. "UD does great work with a variety of charity initiatives, which is a value that aligns closely with our mission at Surf Bagel," Frederick says.

10 AM • HIT THE WATER: Lewes—home to beaches, bird sanctuaries and UD's Hugh R. Sharp Campus for marine research—is the state's first town. If weather permits, explore it by water. UD's Ed Lewandowski, coastal communities development specialist, created the free Coastal Paddling Map (paddlecoastaldelaware.com) for kayaking or paddle boarding routes—any time of year.

11:30 AM • BUY A LEAFY SOUVENIR: Tom Kucharik has been selling plants in Delaware since the '80s, when he used the cash to put himself through college. Now, he and wife Laura operate the Garden Shack Farm, a nursery offering all the pretty perennials, annuals, herbs, shrubs and trees your heart desires. Their daughter, Anna Kucharik, enrolled in UD in the fall—as a landscape architecture major, naturally.

1 PM • STOP FOR LUNCH: Lee Mikles, EG90, O1M, and Jim O'Donoghue, AS91, attended UD together but didn't connect until they became Newark neighbors years later. Despite a lack of management experience (they studied engineering and political science at UD, respectively), they launched the state's beloved Grain restaurants. The Grain Exchange on UD's

STAR Campus is the official post-game spot for Delaware Athletics. In southern Delaware, the go-to spot is Grain on the Rocks at the Cape May-Lewes Ferry terminal. The business partners (and football season ticket holders of 20-plus years) still lean on their Blue Hen education. "It's hard to draw a line between electrical engineering and making crab nachos," Mikles says. "But the program taught me how to problem solve, and that's been essential."

REHOBOTH BEACH

2:30 PM • VISIT THE NATION'S SUMMER CAPITAL: Rehoboth Beach has it all—sea, sand and Schellville, a magical Christmas village that offers year-round family experiences. The operation is owned by Preston and Chris Schell, EHD97, whose Schell Brothers building company recently sponsored an expanded Hen House for home football games (think all-new beer garden and updated menu). Stay hydrated with a treat from nearby Greenman Juice Bar and Bistro, owned by alumnus Jeremy Brockway, AS01.

DEWEY BEACH

6:30 PM • FIND A CRUSH: Think of The Starboard as "UD's home at the beach," says owner Steve "Monty" Montgomery. The shore-casual restaurant sponsors UD's annual 302 Tour for student-athletes, employs about 35 UD students every summer and serves as a major post-graduation celebration spot. Last Memorial Day, it began offering UD-branded merchandise at the retail shop, selling 500 T-shirts in the first two-and-a-half hours. (Perhaps it goes without saying, but be sure to order an orange crush—the official Delaware cocktail, signed into legislation last August by Gov. John Carney, BSPA84M.)

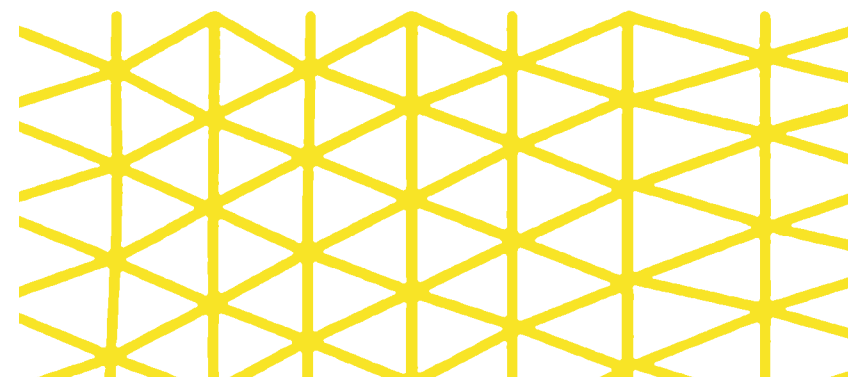
SIX PAGES COULD NEVER CAPTURE THE COUNTLESS BLUE HEN CONNECTIONS THAT SATURATE THE STATE. PLEASE SHARE MORE EXAMPLES WITH US AT MAGAZINE@UDEL.EDU.



Surf Shanty Motel

Get Cozy

Can't find the Surf Shanty motel? Head to the beach block of Van Dyke Avenue in Dewey and look for a UD flag. The spot, co-owned by Rhett Ruggerio, UD's director of government and community relations, was renovated in 2021, and it attracts those who love an active lifestyle (there are bikes to borrow and partnerships with a local yoga studio and surf shop to explore)—but anyone who enjoys a great sunrise view will dig this option. When the *Daily Mail* included Dewey Beach in its list of America's most underrated beach towns, they named the Surf Shanty the place to stay... Blue Hen credentials not required.



THE WINDS OF CHANGE



If offshore wind energy is going to help the planet and boost the economy, as it's primed to do, coastal states will need a workforce that can move the industry forward. Enter UD's new, leading-edge training program catering to engineers, electricians, facilities personnel and anyone else aiming for a turbo- (or turbine-) charged career. The brainchild of Cristina Archer, director of UD's Center for Research in Wind, the program represents a partnership with Delaware Technical Community College, and it includes sessions on the latter's Georgetown campus related to first aid, sea survival, fire awareness and working high off the ground—participants scale a two-story structure painted in UD and DTCC colors. The effort highlights a broader commitment to advancing the blue economy in Delaware and beyond, as the College of Earth, Ocean and Environment recently earned a two-year, \$1.3 million grant to create new jobs and increase knowledge and stewardship of the coastal environment. 🌊

PHOTOS BY EVAN KRAPE



A BERRY GOOD IDEA

In Delaware, strawberries are providing a sweet solution to a big problem.

With an annual economic impact of \$10 billion, agriculture is big business in the First State, and Delmarva poultry supports a significant portion of the industry. This means Delaware's many poultry houses have served the state well.

But many of these structures—an estimated 2,400—are from the pre-WWII era. Now vacant and sitting in various stages of disrepair, each one is longer than a football field, collectively adding up to about 700 acres. Owners of these houses face a decision: repair, remove or renovate. All of these options are costly, and few are practical.

Instead of collecting cobwebs, what if these structures could produce something sweet and nutritious?

That's a question originally posed by Bill Owens, a farmer in Roxana, Delaware, who envisioned growing fruits and vegetables inside the older stick-built structure on his farm.

"There is potential for growers no longer in the poultry business to repurpose older houses—it is a viable way to earn a diverse income," he says. "It could be a home run. It could change everything."

For research and implementation, Owens turned to UD. Experts helped him obtain grant funding for producing and breeding strawberries, and they provided input on microbial testing, lighting, pest management and more. After revitalizing the structure, which took little more than a year, the team began growing the plants. (They settled on a day-neutral variety.)

They quickly discovered something unexpected. Inside the house, the growth of new tips (or little plantlets used to start a new strawberry plant) went into overdrive, potentially unlocking a new opportunity for Delaware growers. Owens equipped the remainder of his space for tip production.

Recently, his daughter, Amanda, returned to the family farm to oversee the project. The new enterprise is called A and B Indoor Farms, and the family is testing storage techniques to enhance propagation and production.

"The method underway requires more research," says Gordon Johnson, formerly the fruit and vegetable specialist for UD's Cooperative Extension, who estimates the cost of converting a poultry house for this purpose to be around \$171,000. But he also notes that the conversion requires "a shorter production schedule, less energy and labor. It could be a profitable enterprise for farmers."

—Michele Walfred, AS07, 14M



MICHELE WALFRED



ABOVE, RIGHT: Strawberries growing inside a renovated poultry house.



ASHLEY BARNAS LARRIMORE

Jayceelyn Aranton (left) leads UD graduate students on a tour of the Western YMCA

BOOSTING HEALTH AND WELLNESS

A new partnership is allowing UD researchers and students to better connect with the local community.

An agreement between the Western Family YMCA and the University's Partnership for Healthy Communities means Blue Hens are volunteering their time to support YMCA programming. In exchange, they're able to promote (and recruit participants for) their own studies.

"The Western Family YMCA is a great partnership site because of its proximity to UD and its focus on healthy living across the spectrum from youth to older adults," says Alyssa Lanzi, assistant professor of communication sciences and disorders.

Several UD researchers focused in areas from biomechanics to language development attended a recent open house.

"As researchers, it's easy to get sucked into our own bubble of academics," says Emily Frazer-Abel, a doctoral student studying second-language acquisition. "But ultimately, it's about the people in these communities ... and [it] takes us being in the community to be able to do that research effectively."

—Tabitha Groh, BE14M

ENRICHING EDUCATION

Suhey Matamoros has lived in Delaware since she was 6 months old. But like many Delawareans, she knew little about the state's earliest people and their culture.

"I've heard the word 'Lenape' in terms of construction, and the word 'Nanticoke' as far as the hospital, but I honestly never really learned about them," says Matamoros, EHD21, a fifth grade Spanish immersion teacher at Lulu Ross Elementary School in Milford

A project led by UD History Professor Barry Joyce is closing that educational gap and shattering the myth that Native American history exists solely in the past. He spearheaded a three-year program called "Indigenous and Latinx Delaware," funded with a Library of Congress Teaching with Primary Sources grant.

The program included workshops meant to educate the educators. Over the past year, 36 Delaware educators visited the Nanticoke Indian Museum in Millsboro, learned how to use various resources for bringing Indigenous and Latinx cultures into the classroom and heard from a variety of guest speakers, such as Chief Dennis Coker of the Lenape Tribe of Delaware.

"It starts with awareness," Joyce says. "We want the narrative to be more inclusive, richer and more accurate."

Now, he has received a three-year grant to extend the workshop series and address other underrepresented groups in the Delaware curriculum.

—Megan M.F. Everhart, AS21M



ABOVE: Nanticoke Tribal Leader Herman Jackson



MARIA ERICCO

TEACHING DOLLARS AND MAKING SENSE

It was love at first lesson plan. As a first-year teacher tasked with leading AP Economics at Newark High School in 2002, Scott Bacon, BE11M, turned to UD's Center for Economic Education and Entrepreneurship for help.

"I became a groupie and came to just about everything they offered," says Bacon, now assistant director for the center (pronounced C triple E), which annually provides roughly 2,000 in-state teachers with peer networking opportunities and high-quality, grade-appropriate professional development in economics and personal finance.

With hundreds of free, pedagogically sound, standards-based lessons, resources and instructional materials, CEEE helps teachers across Delaware's 19 public school districts, charters and private schools infuse their classrooms with hands-on content.

That could mean a free-market simulation in which middle schoolers buy and sell chocolate, determining the price not through a monopoly or a teacher's discretion but through the trial-and-error of negotiation.

Students have also learned about oligopolistic markets like OPEC, in which countries often produce more oil than they agreed to. But if they all produce more, then supply increases,

price decreases, and all teams lose.

"Economics is a way of looking at the world and understanding that people make choices based on incentives," says Bacon, who spent 13 years as a Delaware educator before joining CEEE in 2015. "It applies to everything—corporations, institutions, individuals."

The incentive to continue CEEE's 53-year statewide mission to provide exceptional professional development for teachers and engaging programs and lesson plans for students is an easy one. It can be found in the macrodata of the past year alone: 164 trainings for 2,397 teachers, reaching 241,118 students. But ask Bacon, and the real joy exists in the micro.

"Did an individual student in some teacher's classroom learn something they didn't know before? Did the lightbulb go off for one kid who was bored or didn't understand? When you see these former students coming to UD and studying business, finance, economics, there's nothing more rewarding." 🐦

—Artika Casini, AS05

ABOVE: Third- and fourth-grade students participate in the 35th annual Meaningful Economics Competition, sponsored by CEEE to strengthen economics, personal finance and entrepreneurship education in Delaware elementary schools.

TACKLING HOMELESSNESS

On any given night, more than 1,350 people are homeless in Delaware, with children and Black individuals disproportionately affected. The pandemic exacerbated the crisis, as the state saw a 58% increase in unsheltered homeless populations between 2020 and 2024.

But take heart. Experts from UD's Joseph R. Biden, Jr. School of Public Policy and Administration have developed a forward-thinking approach to find solutions for the First State.

The recently announced Biden School Housing Initiative aims to provide a hub for activities related to housing and homelessness in Delaware.

As part of the Initiative, Stephen Metraux, director of UD's Center for Community Research and Service (CCRS) and a nationally recognized expert on homelessness, and his predecessor, Steven Peuquet, associate professor emeritus, recently teamed up to assess homelessness in Delaware. Their resulting article appeared in an issue of the *Delaware Journal of Public Health* and called for a "coordinated, statewide response" as a "critical first step toward addressing what are, based on the data presented here, unprecedented levels of homelessness for Delaware."

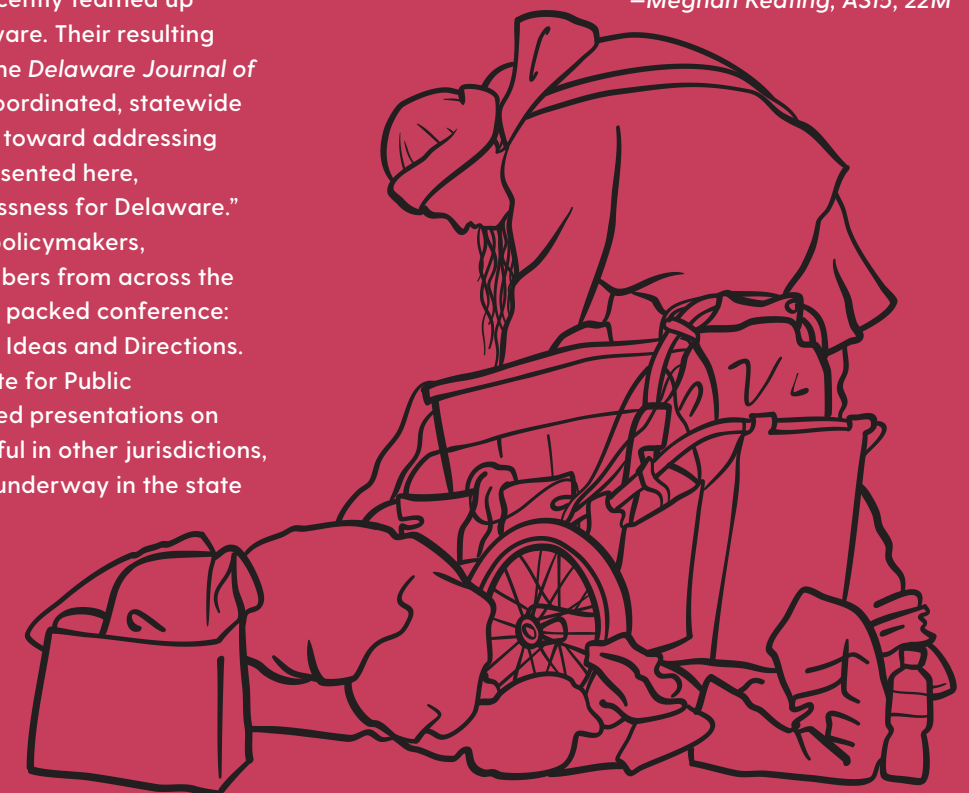
In June 2024, more than 170 policymakers, advocates and community members from across the region gathered in Newark for a packed conference: Homelessness in Delaware: New Ideas and Directions. Hosted by CCRS and UD's Institute for Public Administration, the event featured presentations on services that have been successful in other jurisdictions, innovative approaches already underway in the state

and brainstorming opportunities for developing a more coordinated and deliberate approach to ending homelessness in Delaware.

The day's agenda featured a keynote address from Jeff Olivet, executive director of the U.S. Interagency Council on Homelessness. "You are helping people exit homelessness every day," he reminded the room.

Now, organizers and stakeholders statewide are actively working on ideas presented at the conference related to data integration, the development of permanent supportive housing, efforts to expand Medicaid coverage to housing-related expenses and more. While much of the work is still ahead, as Metraux says, the conference has hopefully "laid the groundwork for developing responses that are aligned with what we have learned about the realities of homelessness in the wake of the pandemic." 🐦

—Meghan Keating, AS15, 22M



SUPERHEROES FOR SMALL BUSINESSES

BY KAREN ROBERTS, AS90, ZIM

Under pressure. For small business owners in Delaware and beyond, the phrase isn't just the title of a David Bowie song—it's reality. Supply chain issues, staffing shortages and payroll nightmares contribute to high stress levels—and higher blood pressure readings—for First State entrepreneurs.

But help is out there.

Enter the Delaware Small Business Development Center, or Delaware SBDC, housed at UD. The unit offers assistance formulating business plans, adapting to inflation, securing necessary credit or funding, even weathering unexpected events—think of the COVID-19 pandemic or the Francis Scott Key Bridge collapse in neighboring Maryland.

The work of Delaware SBDC drives innovation and, ultimately, powers the state's economy. Over the past two years, the center has facilitated 88 new business starts, counseled over 1,500 clients and hosted nearly 240 events, including training for more than 4,000 people. In that same period, Delaware SBDC has helped clients secure \$51 million in capital.

"We should not turn our back on any small business," said Mark Madrid, associate administrator for the U.S. Small Business Administration's Office of Entrepreneurial Development, during a recent visit to campus. "Mustard seeds are the smallest of seeds, but if they are planted correctly and nourished and cultivated, they become a beautiful brush of trees that have beautiful branches where the birds perch."

Along with entrepreneurial leaders from around Delaware and the country, Madrid came to UD in March 2024 to celebrate National SBDC Day. He praised center efforts to nurture small businesses with services and compassion: "Today was the fuel that not only I needed, but that Washington needs. What I see here today is excellence."

Consider Christopher Boozer, Wilmington-based founder of The Trash Porter, a waste removal company specializing

THE DELAWARE SMALL BUSINESS DEVELOPMENT CENTER HELPS DRIVE INNOVATION AND POWER THE STATE'S ECONOMY.

SBDC!

DELAWARE SBDC WORKS TIRELESSLY TO BREAK DOWN BARRIERS TO ENTRY, AND TO ENSURE BUSINESS TALENT IN THE STATE DOESN'T GO UNTAPPED.

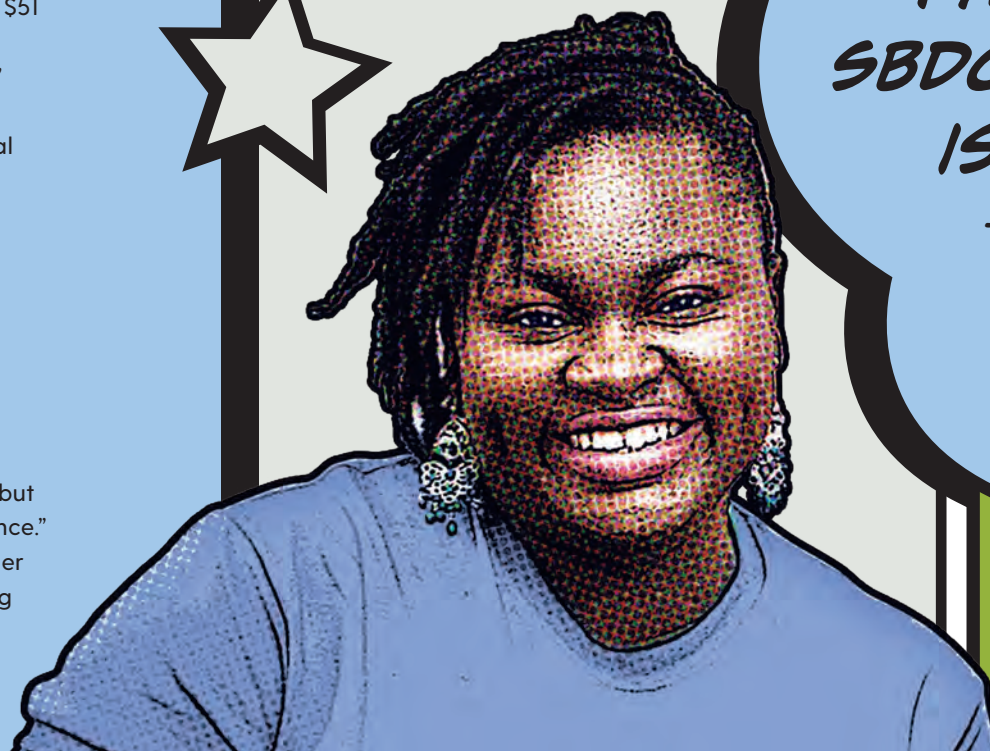
"HAVING A PARTNER LIKE SBDC BY OUR SIDE IS AMAZING."

—GERTHA "GIGI" JEAN

ABOVE: CHRISTOPHER BOOZER, FOUNDER OF THE WILMINGTON-BASED WASTE REMOVAL COMPANY, THE TRASH PORTER. LEFT: GERTHA "GIGI" JEAN, CO-FOUNDER OF THE SEAFORD-BASED INSURANCE FIRM, ONE-WAY. FOLLOWING PAGE: MIKE RASMUSSEN, BSPA05M, CO-OWNER OF SMYRNA-BASED FOOD TRUCK, TACO JARDIN.



PHOTOS BY EVAN KRABE

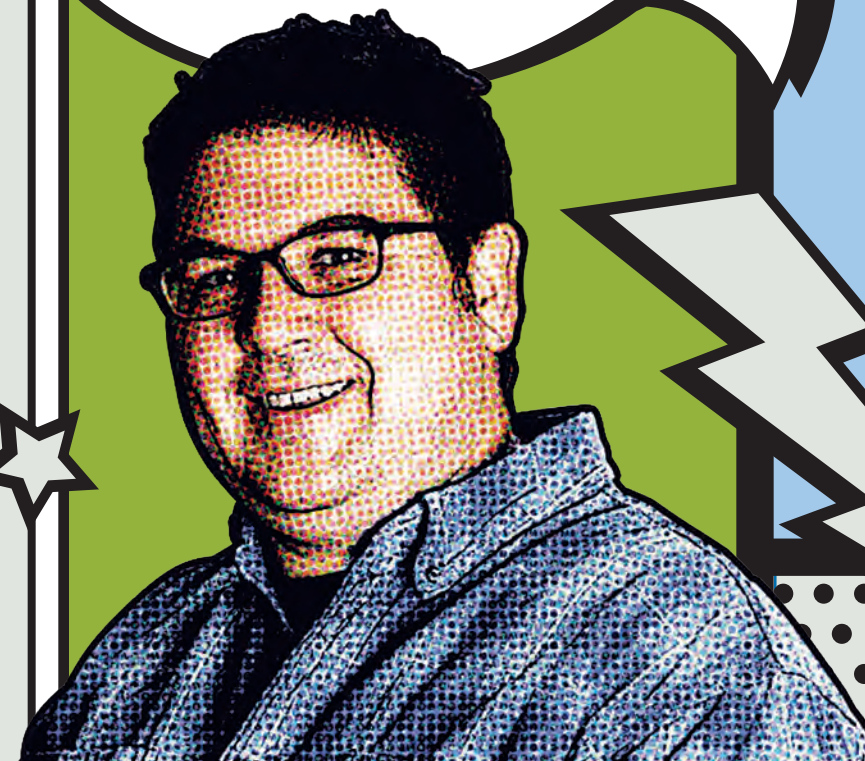


OVER THE PAST TWO YEARS, THE DELAWARE SMALL BUSINESS DEVELOPMENT CENTER, HOUSED AT UD, HAS FACILITATED 88 NEW BUSINESS STARTS, COUNSELED OVER 1,500 CLIENTS AND HOSTED NEARLY 240 EVENTS.

MORE THAN 63% OF THE BUSINESSES SERVED BY DELAWARE SBDC ARE MINORITY OWNED AND 55% ARE WOMEN OWNED. COMBINED, THIS REPRESENTS OVER 80% OF THE CENTER'S CLIENT BASE.

"SBDC HELPED US SEE THINGS FROM A DIFFERENT ANGLE"

—MIKE RASMUSSEN, BSPA05M



SOMETHING TO TACO 'BOUT

Like peanut butter and jelly or cream cheese and a bagel, tacos and craft spirits make perfect culinary sense.

At least, they do at Smyrna's Painted Stave Distilling, which opened the Taco Jardin food truck in fall 2020, during a time of social distancing, outdoor dining and copious takeout ordering.

"The response was fantastic," says co-owner Mike Rasmussen, BSPA05M. "From the first day, we had more business than we could accommodate."

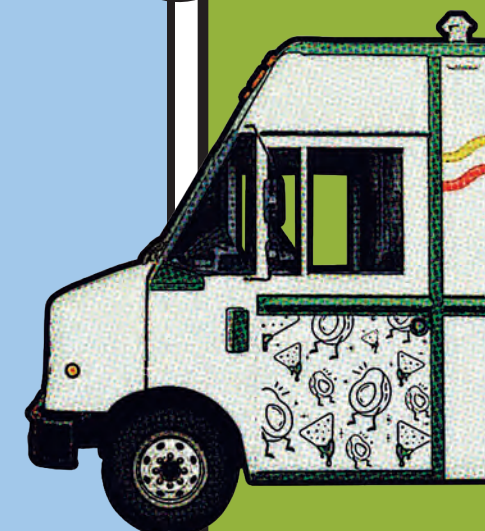
To grow the food operation, he turned (or rather, returned) to UD's Small Business Development Center (SBDC), which had previously offered guidance on applying to one of the state's premier grant competitions. Sponsored by the Delaware Division of Small Business, the Encouraging Development, Growth and Expansion (EDGE) Grant offers non-STEM organizations like Painted Stave up to \$50,000 in funding (and up to \$100,000 for STEM-based companies).

Though the pandemic suspended EDGE operations in 2020—including Rasmussen's grant application to launch the Taco Jardin food truck—services resumed in 2021.

Once again, SBDC was there to assist, helping recraft the original start-up grant to focus on expansion and growth. With a \$25,000 EDGE award, one taco truck now remains firmly planted at the Smyrna-based distillery while the other travels statewide, doubling reach and revenue.

"As business owners, sometimes we live in our own heads," says Rasmussen. "SBDC helped us see things from a different angle," such as rethinking costs to account for increased travel time and staff hours, including the addition of two full-time and two part-time employees.

Today, the Blue Hen often points fellow small business owners SBDC's way. "It's a great network," Rasmussen says, "and it grows entrepreneurship for more and more people in Delaware each year." 🐦



in doorstep garbage collection for the city's apartment residents.

Through Delaware SBDC, Boozer has taken classes, won funding in pitch competitions and developed a solid strategy for growth.

"I didn't even know what a business plan was—I just wanted to take the trash out," says Boozer, who celebrated his company's first anniversary in June 2024. "SBDC has been my foundation and given me [confidence]."

Gertha "Gigi" Jean, can relate. She and her husband started their multilingual, Seaford-based insurance firm, One-Way, to help small businesses navigate their insurance needs. A rocky start courtesy of COVID-19 shutdowns could have left them discouraged. Instead, they worked with an SBDC adviser and secured a Delaware Edge Grant to equip a mobile insurance van, complete an office renovation and hire new staff.

"So many of us are starting businesses with no inheritance, don't know what to do, we're just taking a risk on a dream that might never happen," Jean says. "Having a partner like SBDC by our side is amazing."

More than 63% of the businesses served by Delaware SBDC are minority owned and 55% are women owned. Combined, this represents over 80% of the Center's client base.

"Unfortunately, with a lot of traditional banks, it's hard for the marginalized community," says Delaware SBDC client Markevis Gideon, founder of NERDiT Now, a Delaware-based technology repair service. "Previously, even with a 750-plus credit score, I couldn't get a \$50,000 credit loan."

Delaware SBDC works tirelessly to break down barriers to entry, and to ensure business talent in the state doesn't go untapped.

One partner in this effort is SBDC client Rosie Tooley, a retired educator and current executive director of Lazarus Educational Services Inc., an organization providing entrepreneurial business training for veterans and formerly incarcerated individuals. Barely a year old, Lazarus has already graduated three clients, two of whom had a combined 60 years of incarceration prior to reentry. With Tooley's help, her clients are carving a new path.

"How empowering it is for them, for me and for the SBDC to see the tables turn... from imprisonment to working to fulfill their business dreams," Tooley says. "This impacts them, but also their families—and their community." 🐦

STAR POWER

UD'S CAMPUS HELPS GROW THE ECONOMY AND STRENGTHEN COMMUNITY

It's an ecosystem unlike any other, a constellation of more than 3,000 people from the community, industry and University all committed to the same ambitious goal: ideas that change the world.

It may sound lofty in theory. On the ground, impact is everywhere.

UD's Science, Technology and Advanced Research (STAR) Campus is home to more than 40 companies representing health and life sciences, engineering, biotechnology, data science and analytics, energy, mobility, agriculture and advanced materials. In return, they gain access to exceptional students, world-class faculty and state-of-the-art facilities.

"Innovation doesn't happen in a silo," says Tracy Shickel, associate vice president of corporate engagement. "This is what Delaware does best: bringing people together through public-private-academic partnerships."



UD'S CENTER FOR CLEAN HYDROGEN PLAYS A CRUCIAL ROLE IN THE MID-ATLANTIC CLEAN HYDROGEN HUB.

BUILDING A SUSTAINABLE ENERGY ECONOMY

The California-based energy producer **Bloom Energy** became STAR's first corporate tenant in 2012. Growing from one employee at the time to more than 750 today, the company's greatest impact has been in delivering its fuel cell equipment to make electricity clean, reliable and affordable to all.

STAR is a fitting location for clean energy work. In 1996, UD Professor Willett Kempton pioneered the concept of making charging a two-way exchange, allowing cars to return part of the electricity stored in their batteries to the grid in order to optimize operation and alleviate the intermittent availability of renewable energy sources. As the birthplace of vehicle-to-grid (V2G) technology, UD continues its commitment to clean energy through the **Center for Transportation Electrification**, also located on STAR Campus.

BOOSTING ACCESS TO HEALTH CARE

UD's health science clinics—in physical therapy, nurse-managed care, and speech-language-hearing—handle more than 30,000 annual patient visits. At the **Tower at STAR and Health Sciences Complex**, students in the College of Health Sciences translate what they learn in classroom and lab into tangible action, care and results, supporting community clinics and working in partnership with world-renowned researchers.



BIOPHARMACEUTICALS HAVE A PROJECTED GLOBAL MARKET OF MORE THAN \$500 BILLION IN 2025.



ENHANCING FINANCIAL HEALTH
Turn the page to learn about the unique partnerships underway.



MANUFACTURING LIFE-SAVING MEDICINE

In the 228,000-square-foot building informally known as A.P. Bio, researchers work with industry to develop technologies and standards to advance biopharmaceutical manufacturing. The **Ammon Pinizzotto Biopharmaceutical Innovation Center** houses the National Institute for Innovation in Manufacturing Biopharmaceuticals (NIIMBL), the only manufacturing institute of its kind in the nation and a training ground for master's students in biopharmaceutical sciences. Built with input from industry and government, UD's academic program ensures graduates have a holistic understanding of the field as it moves to the future.



REDUCING CARBON EMISSIONS

Hundreds of researchers and innovators explore wide-ranging research at the **Chemours Discovery Hub**, including water electrolysis for the conversion of wind or solar energy into green hydrogen and for converting this green hydrogen back to electricity with fuel cells.

THOMAS R. CARPER TRAIN STATION
Provides easy access to cities along the East Coast

ENHANCING FINANCIAL EQUITY AND HEALTH

Enhancing health through science has been foundational to the STAR Campus mission and it continues in the world of financial technology.

The Federal Deposit Insurance Corporation reported in 2021 that almost 6 million households in the United States had no checking account, no savings account and no credit line. Poor access to trustworthy financial services contributes to many other difficulties—including finding employment, obtaining insurance and building wealth.

The six-story **FinTech Innovation Hub**, opened on STAR in 2022, seeks to remedy this through its mission: serving as a center of excellence to enhance the nation's financial health and wellness.

At 95% capacity, tenants include nonprofit organizations, financial experts, computer scientists, data analysts, startup companies, even the headquarters of a senior-living community that aims to improve quality of life for residents by tapping into the research prowess of UD and its students.

The other half of the building is devoted to UD-based work, including teams from the Lerner College of Business and Economics.

Focus areas at the FinTech Hub include research, education, workforce development, venture creation and support, and innovation.

"Our vision is that UD becomes the epicenter for fintech scholarship and partnerships—not just regionally, but nationally," says Kimberly Isett, vice provost for academic programs and University initiatives. "We have all the makings to do that." 🐦

PHOTO BY KATHY F. ATKINSON



“THE RESEARCH AND INNOVATION AT THIS NEW HUB WILL EXPAND DELAWARE’S LEGACY OF NATIONAL LEADERSHIP IN FINANCIAL SERVICES, AND IT PUTS UD AND THE STATE AT THE FOREFRONT OF PROMOTING EQUITY IN FINANCIAL SERVICES AND HEALTH—TWO SERIOUS PROBLEMS FACING OUR WORLD.”

—UD PRESIDENT DENNIS ASSANIS

HORN ENTREPRENEURSHIP 🐦
UD's creative engine for entrepreneurship education empowers students to pursue new ideas for a better world.

OFFICE OF ECONOMIC INNOVATION AND PARTNERSHIPS 🐦
OEIP facilitates the economic impact of UD's research commercialization for the benefit of the public and the state.

CENTER FOR DATA-INTENSIVE AND COMPUTATIONAL SCIENCE 🐦
The center provides expertise and infrastructure support on topics like storage resources and datasets.

CENTER FOR ECONOMIC EDUCATION AND ENTREPRENEURSHIP 🐦
CEEE supports more than 2,000 K-12 economics and personal finance teachers annually. Read more on page 14.

COMPUTATIONAL RESEARCH AND PROGRAMMING LAB 🐦
The lab focuses on high-performance computing, AI and machine learning, as well as the migration of real-world code bases to large systems.

CENTER FOR ADVANCING FINANCIAL EQUITY (CAFÉ) *
The nonprofit advances financial health and wellness for underserved communities through fintech innovation and partnerships.

KENDAL CORPORATION*
This nonprofit supports the over-55 community in areas of financial literacy and cybercrime education and works across UD on projects related to engineering, business, health science, sustainability and more.

DELAWARE BIOSCIENCE ASSOCIATION*
Delaware Bio connects financial health and physical health. Its 130-plus member companies and organizations represent 8,000 innovation-based jobs vital to Delaware's economic future.

ARTIFICIAL INTELLIGENCE CENTER FOR EXCELLENCE 🐦
This is where AI experts within UD and beyond collaborate on projects, such as synthesizing music for children with autism or redesigning cities to protect against climate change.

TECH IMPACT*
This is a "data-for-good" organization that supports IT, workforce development and data science projects for other nonprofits, and offers a fellows program (with salaries upward of \$75k) to expose graduates to the nonprofit sector.

RAAD360*
RAAD360 is composed of a team of professionals who innovate in global supply chain functions and risk, and developers who build new, high-performance applications.

INNOVATIVE PRECISION HEALTH*
This AI company is building a digital platform to predict neurological diseases like Parkinson's and dementia. It is the first health care analytics company to deliver multi-dimensional patient performance data and comparative efficacy metrics to optimize the continuum of care.

DISCOVER BANK/ CAPITAL ONE*
The largest consumer-only bank in the U.S. and a leading fintech employer in Delaware, Discover Bank established a \$36 million venture fund and deployed \$40 million in Community Reinvestment Act funds to develop the FinTech Innovation Hub. Under the new merger, Capital One remains fully committed to Discover's mission.

GRAIN EXCHANGE*
The craft bar and kitchen was founded by UD alumni Lee Mikles, ENG90, and Jim O'Donoghue, AS91, with numerous locations offering unique settings and ambiance. The STAR Campus location spotlights such in-state innovations as nylon, touchscreen technology and the first steam-powered amphibious vehicle.

🐦 University of Delaware tenants * Industry, community or nonprofit tenants

STATE POLICY, UP CLOSE AND PERSONAL

Call it experiential learning at its finest, or small-state symbiosis, or simply, the kind of education that can only happen in Delaware.

For 44 years now, UD's Legislative Fellows Program has provided college students a unique and immersive foray into the state legislative process. Working three days a week from January to June, students conduct nonpartisan research for lawmakers, staff standing committees, engage in constituent relations and do the critical work that would otherwise fall to full-time professionals.

Proven mutually beneficial in linking UD's talent capacity with the legislature's research and staffing needs, the successful partnership has resulted in the program's growth from two students in 1982 to more than 380 alumni working in all levels of local, state and federal government today.

Delaware Gov. John Carney, BSPA84M, served in the second cohort of Legislative Fellows, an experience

he has described as "transformational" in helping to "understand the key role that public service plays in improving local communities."

Current fellow Tyron Herring, BSPA26M, credits the program with "demystifying the political law-making process." And 2002 fellow Emily Gonce, BE00, BSPA02M, says, "What better way to learn about the interactions of the government than to be in the middle of it?"

"It's an excellent laboratory for decision-making," adds the program's founding director Jerome Lewis. "Students see different approaches and values from different people around the state."

Fellows have worked on issues ranging from criminal justice reform to feral cats. They have studied peer-lending programs to aid small businesses, presented policy briefings comparing health care plans in Delaware with those in other states and nations, and researched topics that have eventually become law.

What students find, time and again, is a community of legislators who put the citizens of the First State first.

"Being immersed in the environment dispels misconceptions and makes you appreciate the people and system a bit more," says Program Manager and 1998 fellow Lisa Moreland Allred, AS96, BSPA98M. "Legislators may disagree, but at the end of the day, they know they need to work on the next issue together. It's neighborly and civil. It's what we call 'the Delaware way.'" 🐦

"WHAT BETTER WAY TO LEARN ABOUT THE INTERACTIONS OF THE GOVERNMENT THAN TO BE IN THE MIDDLE OF IT?"

—2002 fellow Emily Gonce, BE00, BSPA02M



Pictured left to right: 2024 Legislative Fellows Angela Hoyle, Destiny Carmona and Rachel Gaebel.

EVAN KRAPE



MICHELE WALFRED

Q+A EMMALEA ERNEST

EMMALEA ERNEST wants you to eat more veggies. Or, at least, more kinds of veggies. As an assistant professor in the Department of Plant and Soil Sciences and the Cooperative Extension fruit and vegetable specialist, she's working to bring crops to Delaware that aren't typically grown in First State soil. Below, she spills the (fava) beans on her work.

Why does this matter? Farmers need options because it's good for risk management. Grow just one crop—or only a handful of crops—and you are more susceptible to pest or disease issues, weather-related issues or market-related issues. For consumers, this work means a wider variety of locally grown options.

What are some vegetables that have come—or may come—to market because of this work? One USDA-funded project I'm involved with—in collaboration with Virginia Tech, Virginia State and the University of Maryland—is focused on fava beans, identifying which lines are suitable for production in the Mid-Atlantic region. In a Georgetown field, I've screened 500 different fava bean lines from around the world to see if they will grow in Delaware. I'm particularly interested in larger types

that people from Latin America, Asia and the Middle East are accustomed to eating but can't find here. Something unique is that we are looking at an overwintering production system, a niche timeframe when many fields in Delaware are underutilized.

Does your work involve engineering vegetables so they are capable of growing here, or is this about finding what crops can thrive in their current state? I have one breeding program focused on developing new varieties—more resistant to pests and climate change—and that is for lima beans.

What's the timeline for introducing a new crop to market? If we find something good among the lines we test, it can happen pretty quickly. If breeding needs to be done, it can be closer to 10 years.

What drew you to this work? I have been at UD for 20 years. I came to work on beans, and I stayed because I enjoy interacting with Delaware growers.

What sets First State growers apart? They are interested in trying new things. If you're doing research and are trying to encourage people to try something different, it's encouraging to have people who are willing.

Do you have a bucket list fruit or vegetable you dream about bringing to Delaware? When I was working on my

master's in Ecuador, I became familiar with fun and interesting crops that would be marginal here. Climate change would allow us to grow subtropical crops, but I can't say I'm hoping for that. A warmer climate presents new opportunities, but it also makes it very hard to grow existing crops.

Are Delaware growers seeing the effects of climate change? Yes, temperature changes are already impacting the quality and yield of certain vegetable crops.

Your research purview includes crops already growing in Delaware. What does this work look like? I've done a lot on watermelons, a very important crop to the state. Right now, I'm looking at biofumigation, a practice that uses a particular cover crop incorporated into the soil to deal with some pretty intractable pest and disease problems. I've also worked to identify practices that help growers cope with rising temperatures, like lighter-colored mulch to lower soil temperatures and shade cloths to protect from the sun.

We hear a lot about agricultural challenges, from rising costs to a changing climate. What's giving you hope? The necessity of food. At UD, people are interested in engaging in more applied research and I think that's great. They want to do impactful work, and this is just one opportunity. 🐦



VENTURE OFF THE HIGHWAY

From the Piedmont to the Coastal Plain, Blue Hens are leaving their mark, building businesses, shaping communities and leading organizations that make our state so special.

To learn more about these touchpoints, check out our ultimate road trip, starting on page 4. This Hen-infused itinerary is a guide to some of the many people, places and experiences that embody UD pride and reflect the University's unmistakable statewide influence.

So, hit the road, crank the tunes and let the Blue-and-Gold spirit guide your adventure.