UNIVERSITY OF
DELAWARE
MAGAZINE
Volume 31 • Number 2

You know her work even if you don't know her name. Meet...

Ann Lowe.

LIGHTING UP THE HENISPHERE.

ALUMNI WEEKEND 2023

The social event of the year. That's the only way to describe Alumni Weekend, which brought hundreds of Blue Hen graduates and their families back to campus this June. Missed the Blue-and-Gold fun? Save the date for Alumni Weekend 2024, set for May 31-June 2. In the meantime, mark your calendars for Homecoming on Saturday, Oct. 14 (see page 32 for more).

Photo by Evan Krape

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FEATURES

On the cover:
Illustration of Ann Lowe by Sally Wern Comport ©2023, based off *Ebony* magazine photograph.

IN EVERY ISSUE

On your mark, get set, go!
Nothing jogs the memory like being back on campus. This year's Alumni Weekend featured annual favorites like Dela-bration (previous page) and the family 5k (pictured here). Additional events included a dining hall brunch with UD's mascots, drag show bingo, tours of UDairy Creamery, cupcake decorating at Vita Nova, a Blue Hen concert and much more. Photo by Mikey Reeves

UNIVERSITY OF DELAWARE MAGAZINE

Volume 31, Number 2

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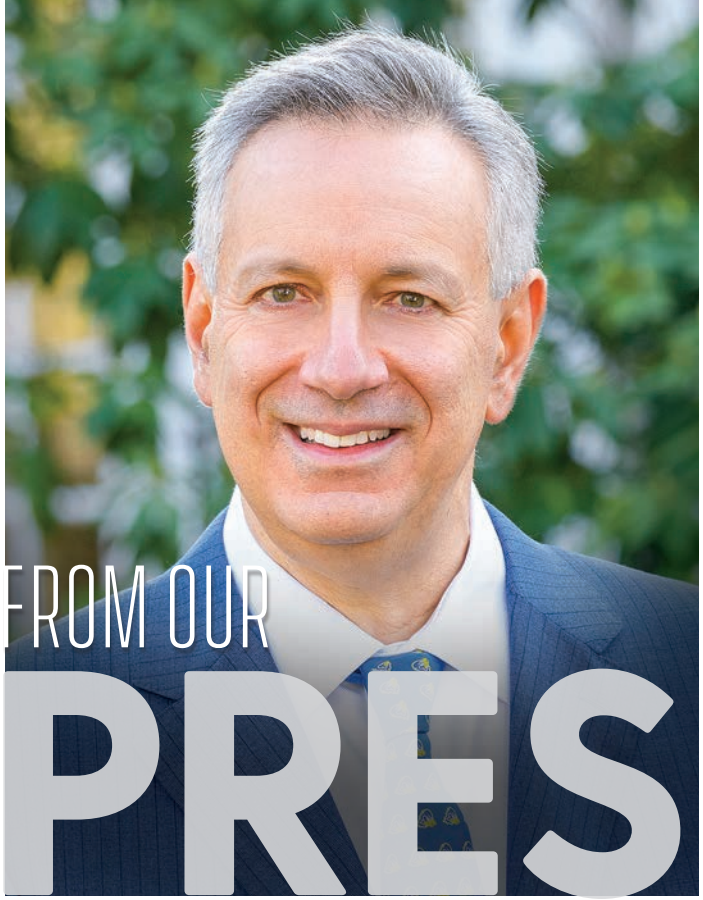


FROM OUR PRESIDENT

THE GENEROUS HEART OF OUR BLUE HEN FAMILY

At the University of Delaware, we are extraordinarily fortunate to have bright and creative students, outstanding educators and researchers, staff deeply committed to advancing our mission, and a global network of loyal alumni and friends.

What truly sets UD apart, though, is the abiding generosity of our community, propelled by a shared vision of a brighter future. As we celebrate the historic success of UD's Delaware First fundraising and engagement campaign, we are all grateful to the more than 113,000 members of our Blue Hen family who raised more than $1.05 billion to create a far-reaching and enduring impact for generations.

Quite literally, every donor and every dollar mattered. The selfless contributions from our donors and friends enabled UD to not just reach, but also exceed a milestone that only a handful of publicly supported institutions have ever achieved. Throughout the campaign, our entire UD community has been inspired by everyone who contributed their time, expertise and resources to the University. Along the entire journey of the campaign, our supporters understood the importance of planting seeds today that will bear fruits of opportunity tomorrow…and for decades to come.

Fueled by the generosity and support of our community, this is truly how the University of Delaware has grown and thrived over the years. Our students—in the arts and humanities, science and technology, engineering and education, health care and business, and so many other world-class programs—are the beneficiaries of those who have built and invested in our institution since its earliest days. Discoveries and innovations made on our campus have transformed and improved countless lives. They are all vivid reminders that our bold ideas and our hard work can—and will—have immeasurable impact beyond our imagination.

This fall, as our newest students, faculty and staff join us at UD, my wife, Eleni, and I welcome them with renewed confidence and optimism, inspired by the loyalty and generosity of our Blue Hen family, one that is united like no other.

Dennis Assanis

Dennis Assanis, President

EVAN KRAPE

Celebrating the impact of Delaware First, UD's largest, most transformative fundraising campaign

MAKING HISTORY

By Christine Serio-Shively

Record-breaking. Game-changing. Historic.

$1 billion+ contributed by more than 113,000 donors.

On June 30, 2023, the University of Delaware concluded Delaware First: The Campaign for the University of Delaware with extraordinary results. Launched in the fall of 2017, Delaware First brought together more supporters to raise more dollars than ever in the University's 280-year history.

This comprehensive fundraising and engagement campaign has truly transformed the lives of those who will transform the world. Because of Delaware First donors, a first-generation student received a scholarship to help fulfill her dream of becoming a teacher. A professor was able to take chances in his research, advancing the discovery of a lifesaving medicine. A student-athlete had access to state-of-the-art training equipment to recover from an injury and get back in the game. A junior finance major started his own company and expanded it to a global enterprise. A rare disease survivor was able to become a nurse and work with patients in the same hospital she was treated in. A music major who had never left the state could travel to Croatia and lead the UD Chorale in an impromptu concert in the streets.

Donors to the University of Delaware have transformed our campus, opened new worlds and experiences for students, challenged our understanding of what is possible and empowered Blue Hens to soar to new heights. The impact of Delaware First will be felt for years, decades and generations to come, leaving a lasting legacy.

DELAWARE FIRST

THE CAMPAIGN FOR THE UNIVERSITY OF DELAWARE

BY THE NUMBERS

11
new capital projects, totaling more than 650,000 square feet

113,402
donors

$177.5 million
for undergraduate aid

46
new professorships and chairs

UD is one of only
53
publicly supported universities to raise
$1 billion

$66.5 million
raised for graduate students

$85.6 million
raised for faculty support

11,018
Double Del couples have given more than $78.5 million

482
new undergraduate scholarships

HISTORY IN THE MAKING

Delaware First launches with $750 million goal

2017

2018

- **Inaugural "I Heart UD Day" of Giving**

  To date, this annual event has raised more than $4.8 million from 28,523 donors for 575 different fundraising projects.

- **Tower at STAR opens**

  The 10-story building fosters learning, discovery and collaboration in the health sciences.

- **JPMorgan Chase Spectrum Scholars launches in partnership with UD to provide career pathway for students with autism**

- **Honors College is created**

- **Whitney Athletic Center opens to provide state-of-the-art support for student-athletes**

  Read more about Delaware Athletics on p. 22.

- **Worrilow Hall opens**

  The flagship research facility for the College of Agriculture and Natural Resources includes renovated classes, labs and lounges.

- **JEDI (Justice, Equity, Diversity and Inclusion) Fund launches**

- **Ammon Pinizzotto Biopharmaceutical Innovation Center opens**

  Six-story building focuses on life-saving medicines and transformational treatments. Read more on p. 26.

- **Institute for Engineering Driven Health is established**

  The Institute focuses on the discovery, development and commercialization of technologies to significantly advance healthcare.

- **Biden School launches SNF Ithaca Initiative, a new civil discourse program**

2021

- **Graduate College is established**
- **UD surpasses $750 million goal six months early**
- **School of Music is established**

- **Vita Nova gets transformed**

  Donations fund new teaching kitchen, dining room and innovation kitchen.

- **President's Scholarship Challenge creates 56 new undergraduate scholarships**
- **University extends Delaware First campaign, announces $1 billion goal**

2019

- **Blue Hen Strong Fund supports students' most urgent needs**

  Launched during the pandemic to address emergency challenges faced by Blue Hens, this Fund continues to support the most pressing needs of students.

2020

Delaware First campaign concludes, and

THE IMPACT LIVES ON.

2023

- **Horn Entrepreneurship celebrates 10 years**
- **Building X construction begins**

  Interdisciplinary hub to house research in human disease, neuroscience and human behavior, and quantum science and engineering.

- **Renovations to create Center for Intercultural Engagement begin**

  New space on the second floor of the Perkins Student Center aims to foster student collaboration and celebrate different cultures, identities and experiences.

- **Wellbeing Center at Warner Hall opens**
- **$1 Billion goal is met—and surpassed!**

2022

PHOTOS BY KATHY F. ATKINSON, ASHLEY BARNAS, CHRISTOPHER GINN AND EVAN KRAPE

ON THE GREEN

News from campus and beyond

TOP GLOBAL UNIVERSITY

The University of Delaware has once again been identified as a top-500 institution in the world, according to one of the most widely read rankings in the world.

UD placed 498th in the 2024 edition of the prestigious QS ranking, climbing over 80 spots since the previous year. The University was last ranked among the top 500 in 2020.

As a pioneer in global education, UD has long held a strong reputation among universities worldwide. In the past few years, UD has continued to expand interdisciplinary and global opportunities for Blue Hens, a priority of its strategic plan. To learn more, visit udel.edu/academics/global.

KATHY F. ATKINSON

NEW LERNER DEAN

Oliver Yao has joined UD as dean of the Alfred Lerner College of Business and Economics.

"The Lerner College has demonstrated excellence in both research and education," says Yao. "Together, we will nurture future business leaders who will take on the world's most pressing challenges."

Yao arrives at UD following 20 years at Lehigh University, where he served as interim deputy provost for graduate education, associate dean for graduate programs and the George N. Beckwith '32 Professor in the College of Business. His research interests focus on the interdisciplinary fields of information systems and operations management.

DESTINATION OF CHOICE

UD continues to recruit the best and the brightest.

Over the past year, more than 37,000 students applied to the freshman Class of 2027, a six percent increase over the previous year's record-setting application numbers. The heightened interest has netted a class with the highest GPA and SAT scores in recent memory, with students averaging 4.1 and 1335, respectively.

The demand isn't limited to students entering as freshman. UD nearly doubled last year's number of transfer students, from 323 in 2022, to 570 this year. The University received apps from all 50 states and more than 130 countries for the fall 2023 semester.

"It's the fifth year in a row of record applications," says Rodney Morrison, vice president for enrollment management. "The academic quality, the diversity of experiences and accomplishments of this class are among the best we've ever seen. The students' resilience while navigating a pandemic to reach this level of achievement is astounding."

Growing talent at UD also means expanding access. Since 2010, UD has witnessed a 74% increase in first-generation students and a 28% increase in Pell Grant recipients. Since 2016, undergraduate financial aid has increased by 71%.

-Adam Shutz

NEW CAMPUS BUILDINGS

UD's landscape evolution continues with the Fintech Innovation Hub, which opened this summer on the Science, Technology and Advanced Research (STAR) Campus. Meanwhile, the 25,000-square-foot addition to Drake Hall, which features teaching and research labs for chemistry and biochemistry, is now complete. And "Building X," which will replace McKinly Lab and provide research and teaching spaces for multiple departments including biology, psychology, neuroscience, physics and quantum science, is scheduled for completion in fall 2024.

KATHY F. ATKINSON

FINTECH INNOVATION HUB

KATHY F. ATKINSON

DRAKE HALL ADDITION

BUILDING X

TOP-RANKED GRAD PROGRAMS

The 2024 edition of "Best Graduate Schools" from *U.S. News and World Report* has ranked 22 UD programs among the nation's best, including 10 in the top 50.

UD'S TOP-RANKED GRADUATE PROGRAMS INCLUDE:

CHEMICAL ENGINEERING | 7 *UP FROM 8*

PUBLIC FINANCE AND BUDGETING | 14 *UP FROM 24*

NONPROFIT MANAGEMENT | 23

PUBLIC MANAGEMENT AND LEADERSHIP | 23 *UP FROM 32*

EDUCATION SCHOOLS | 27 *UP FROM 39*

PUBLIC AFFAIRS SCHOOLS | 28 *UP FROM 29*

ENGINEERING SCHOOLS | 42 *UP FROM 45*

MATERIALS ENGINEERING | 42 *UP FROM 44*

MECHANICAL ENGINEERING | 49 *UP FROM 50*

BIOMEDICAL ENGINEERING | 50

CIVIL ENGINEERING | 55

COMPUTER ENGINEERING | 57 *UP FROM 69*

CHEMISTRY | 58

ELECTRICAL / ELECTRONIC / COMMUNICATIONS ENGINEERING | 66

EARTH SCIENCES | 70

PHYSICS | 73

COMPUTER SCIENCE | 77 *UP FROM 82*

MATHEMATICS | 80

NURSING MASTER'S PROGRAM | 82

NURSING SCHOOLS—DOCTOR OF NURSING PRACTICE | 83

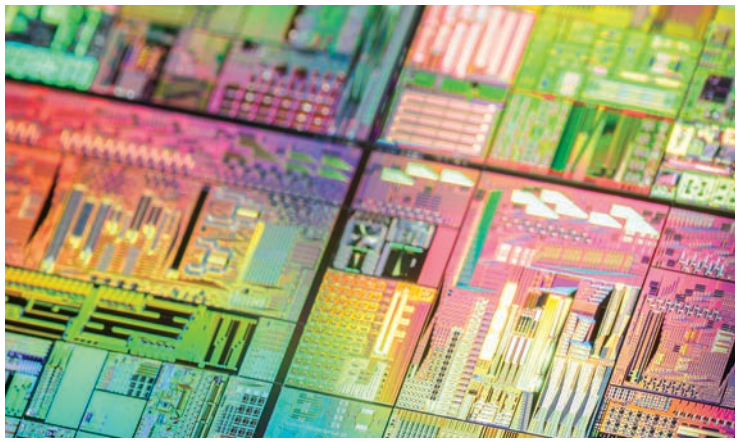
BUSINESS SCHOOLS—FULL-TIME MBA | 119

BUSINESS SCHOOLS—PART-TIME MBA | 133

A TO Z WHAT'S GOING ON AT UD

UD startup Biospection is working on technology to detect **FOODBORNE** pathogens like E. coli and salmonella in three to six hours, long before infected produce ever reaches consumers.

Engineering professors are working to **ADVANCE PHOTONICS** –the study of lasers, optical fibers and cutting-edge light-based innovations–as part of a multi-state collaboration.



A new graduate program in data science aims to train the next generation of experts in **BIOMEDICINE AND BIOINFORMATICS**

New UD research links low levels of vitamin **D** in pregnancy with greater behavioral issues in childhood.

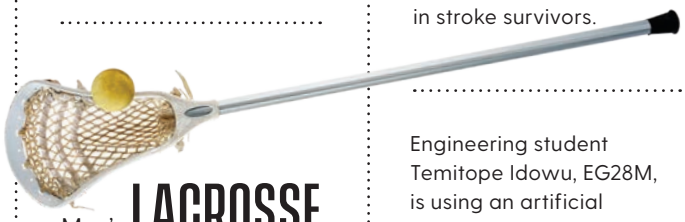
UD Prof. Jodi Hadden-Perilla uses **CROCHET** to help non-scientists understand the structural components of viruses.

Entrepreneur magazine and *The Princeton Review* ranks UD's Horn **ENTREPRENEURSHIP** program as one of the best in the nation for the fourth year in a row.

UD experts are teaching middle schoolers about **GEOGRAPHY,** helping kids understand that "it's not memorizing places and states... It's understanding what is happening where and why."

Spotted lanternflies are expert **HITCHHIKERS,** according to new UD research on their reach and spread.

UD Prof. Jeremy Firestone spends six weeks in **ICELAND** to teach and help shape wind-power policy in the so-called land of fire and ice.



Men's **LACROSSE** clinches their second straight CAA tournament title and breaks the program record for most goals scored in an NCAA Tournament (25-10 over Marist).

"Look up and remember what inspires you," Commencement speaker MAE **JEMMISON,** engineer, physician, astronaut, and the first African American woman in space, tells the Class of 2023.

A UD lab utilizes a **KINARM** exoskeleton robot to assess and better treat upper-limb impairment in stroke survivors.

Engineering student Temitope Idowu, EG28M, is using an artificial beach to study undersea **MUNITIONS** leftover from war, as well as the likelihood of these explosives washing ashore in a storm.

Blue Hens Nolan Henderson, BE21; Thyrick Pitts, AS20; and Kedrick Whitehead, HS22, are

NFL BOUND,

having signed undrafted free agent contracts with the Baltimore Ravens, Chicago Bears and Tampa Bay Buccaneers, respectively.

UD offers a free **OCEAN** Literacy course to Delawareans interested in the body of salt-water that covers 70% of the Earth and contains 97% of the planet's water.

Nursing student Lily Ramos, HS24, competes—and wins—a college-edition episode of The

PRICE IS RIGHT.

UD's new **QUANTUM SCIENCE** and Engineering program trains students for an industry where job postings currently exceed available talent by 300%.

Chris Grome, EG23, UD Baseball pitcher, is also a **ROCKET SCIENTIST** with the U.S. Nuclear Regulatory Commission fellowship program.

A newly launched Office of **SUSTAINABILITY** will help advance sustainable approaches in all aspects of life at UD.

A new research team is working to make

TRANSPORTATION

more equitable in the mid-Atlantic.

Astrophysicist and UD Prof. Federica Bianco is part of a 16-person NASA advisory panel on "unidentified anomalous phenomena," or what used to be known as

UFOs.

VINNY, a black lab service dog, receives an honorary health sciences "doggree" at Commencement alongside owner Shawn Horrocks, HS23, a U.S. Marine Corps veteran.

A five-year research partnership with the U.S. Military Academy at

WEST POINT

explores music's effects on military and athletic teams, brain injury recovery and more.

A UD team has joined an international effort to gather info on cosmic

X-RAYS,

important for understanding physical conditions in space, like temperature.

An engineering professor is working to improve biomanufacturing in space, starting with

YEAST STRAINS

currently on the International Space Station.

UD Prof. Saleem Ali has been appointed to the United Nations' advisory board on

ZERO WASTE,

which refers to a systems-level redesign of global production and consumption.

INTRIGUED?

READ MORE | udel.edu/udaily/udmagazine

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QUOTED IN THE NEWS

"MANY OF US MIGHT BE OUT OF SHAPE WHEN IT COMES TO SOCIALIZING."

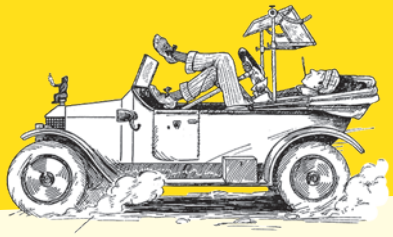
Philip Gable, psychological and brain sciences professor, in *The New York Times*

"I very much like the idea of a 'tidal heartbeat'...the glacier flapping up with warm water intruding during the incoming tide and flapping down with colder water exiting during the outgoing tide."

Andreas Muenchow, oceanographer who studies the Petermann Glacier, in *The Washington Post*

"WE'RE FINALLY GOING TO SEE THE WIZARD OF OZ."

Jessica Warren, geochemist and earth sciences professor, in *Science.org* on an international effort to exhume never-before-seen rocks from the earth's mantle



"Don't think about the entire planet and its problems; just worry about your own little piece of the planet."

Doug Tallamy wildlife ecology professor, on how on how to promote successful conservation on private property, in *Smoky Mountain News*

"We haven't reached the point where we desperately need more storage, but this day will be coming soon."

Weisong Shi, computer and information sciences professor, in *Yahoo! Finance* on the data-holding capabilities of self-driving cars

"IT'S VERY HARD TO SAY YOU'RE NOT RELATED TO CHINA."

Sheng Lu, fashion and apparel studies professor, in a *CNN* story on fast fashion companies

"I RECOMMEND PEOPLE NOT CONSUME IT."

Kali Kniel, microbial food safety professor, on raw, unpasteurized milk in *HuffPost*

"They're the biggest rotating devices on the planet. They dwarf a 747."

Jeremy Firestone, marine science professor, discusses offshore wind farms in *Fortune*

"AN ITEM THAT LASTS A LIFETIME MAY NOT BE AS ATTRACTIVE TO TODAY'S CONSUMERS."

Prof. Neri de Kramer anthropology professor, on Tupperware and our throwaway culture in *The Philadelphia Inquirer*

STELLAR STUDENTS

You already know that UD students are ready, willing and able to change the world. But it's nice to hear it from some of the most prestigious scholarship organizations, tasked with honoring the best and brightest young minds in the nation. In 2023, a record number of Blue Hens were recognized with national and international accolades. Here's a look at what makes them so worthy.

Among the world's most competitive awards, the Gates Cambridge Scholarship funds postgraduate study at the University of Cambridge for 23 of the country's most academically outstanding and socially committed citizens.

Willa Lane, AS23, an Honors marine biology major with a psychology minor.

Why: At UD, Lane has conducted important research on two topics: the susceptibility of sea anemones to bleaching, and a psychological phenomenon called boundary extension, in which people remember seeing more of a photo than they actually saw.

What's next: Lane's doctoral studies will focus on cognition in marine animals. She hopes to redefine our understanding of intelligence.

Fun fact: Lane credits much of her interest in marine biology to an octopus whose hand she held when she was 8 years old.

Congress established the Truman Scholarship in 1975 to develop the next generation of public service leaders. This year's 62 Truman Scholars were selected from a national pool of 705 candidates.

Shreeya Parekh, EG24, AS24, an Honors computer science and political science double major.

Why: As a member of UD's Cybersecurity Scholars Program, Parekh has studied the political implications of cyberattacks and the technological threats to human rights.

What's next: Developing equitable algorithms; building policies and safeguards to help protect vulnerable communities; and supporting equitable innovation in cyberspace.

Fun fact: Parekh is co-founder of Students Thriving in Excellence and Purpose Delaware (STEP UP DE), a nonprofit that provides mentorship, workshops and hands-on educational activities to low-income and at-risk youth.

The Goldwater Scholarship is one of the nation's oldest and most prestigious awards for undergraduates pursuing STEM research careers. The following four Blue Hens below are among 413 scholars selected from a nominated pool of 1,267.

Dana Kullgren, AS24, an Honors physics major with minors in French and math.

Why: She worked with IceCube, an observatory in Antarctica which collects data about high-energy subatomic particles called neutrinos. The data helps scientists explore the cosmos and answer fundamental questions in physics.

What's next: A doctoral degree in astrophysics.

Fun fact: When Kullgren isn't studying cosmic rays, she enjoys playing guitar.

Miyu Mudalamane, EG24, a chemical engineering major with minors in biochemical engineering and sustainable energy technologies.

Why: She is researching safer ways to make nitroaromatic compounds, which are commonly used in antibiotics.

What's next: A doctorate in chemical engineering with plans to continue creating organic compounds more sustainably.

Fun fact: Mudalamane is also an award-winning pianist.

Derek Wu, AS24, an Honors double-major in biological sciences and environmental science with a minor in biochemistry.

Why: His work has advanced our knowledge of human impacts on tree growth in urban settings, as well as microbiology in marine waters and soil.

What's next: A doctorate in microbiology, then a career as a microbiology professor.

Fun fact: Wu is first author of a textbook chapter used in Prof. Carlton Cooper's introductory microbiology course.

Qi (Matthew) Zhang, EG24, AS24, a double major in chemical engineering and chemistry with a minor in biochemical engineering.

Why: He is studying the interactions between cells and their microenvironment, so we can better treat immune system disorders.

What's next: A doctorate in biochemical or chemical engineering, with plans to develop new therapies for difficult-to-treat diseases.

Fun fact: Originally from Beijing, Zhang was selected in middle school to participate in the Chinese Chemistry Olympiad, widely considered the most difficult chemistry exam on the planet.

Photograph of Willa Lane by Evan Krape. All other student photos by Kathy F. Atkinson.

THE FUTURE IS BRIGHT

Eduardo Nombera-Bueno moved to New Jersey at 8—a tough transition for a Spanish-speaking kid originally from Lima, Peru. A backhanded compliment he often received: "You are so smart... for someone like you."

Now, Nombera-Bueno is proving exactly what 'someone like him' can do. The Honors double major in chemical engineering/materials science and engineering recently became one of 15 students and alumni from UD in 2023 to receive a National Science Foundation Graduate Research Fellowship, a prestigious award earned by the nation's most promising scholars—those expected to advance the nation's technological infrastructure, national security and economic well-being.

As an undergraduate, Nombera-Bueno explored ways to turn tree biomass into sustainable alternatives for conventional plastics, and he mentored incoming students of color, serving on a diversity, equity and inclusion board for his major. Now, he's set to attend Massachusetts Institute of Technology, where he hopes to advance technologies for bettering human health while continuing his outreach to underrepresented groups in STEM.

OTHER 2023 RECIPIENTS OF THE NSF GRADUATE RESEARCH FELLOWSHIP INCLUDE:

Rebecca Beswick, EG23; Ishika Govil, EG23; Jodi Graf, EG29PhD; Windsor Lundy, AS28PhD; Stephanie Ross, EG22; Max Sokolich, EG21; Kathryn "Katy" Strand, EG22; Tamara Turski, EG21; Rebecca Clements, EG21; Daniel Markus DeSantis, EG22; Tatyana Nesterova, AS21; Nisha Ramen, EG20; Lauren Reich, AS19; Patrick Gilbert Mercado Reyes, AS19.

HER NAME WAS *ANN LOWE*

BY DIANE STOPYRA

The wedding between John F. Kennedy and Jacqueline Bouvier had all the elements of a fairy tale: dapper groom, dewy-eyed bride—and a fairy godmother who conjured a dress as if by magic before disappearing into thin air.

Among the world's first Black high-fashion designers, the artist hand stitched (under improbable circumstances) the future First Lady's enchanted silk taffeta gown. The final product cast a spell over 900 attendees, frenzied media and an entire fashion industry. But much like the satin bow she affixed to the underside of the dress—the bride's 'something blue'—Lowe remained hidden from view. She received scant credit for this or any other iconic garment during her trailblazing career.

Until now.

Experts from University of Delaware and Winterthur Museum, Garden and Library are teaming up on the largest exhibition of the artist's work to date: *Ann Lowe: American Courtier.* Running at Winterthur from September 23, 2023, through January 7, 2024, it will feature 40 dresses designed for some of America's most prominent figures. The *pièce de résistance*: Jackie's wedding gown. Not the original (that's too fragile to display) but a replica created by UD fashion instructor Katya Roelse and a small team of undergraduates.

Hard-won calluses aside, the Blue Hens have gleaned much from the process, including renewed appreciation for the power of fashion to reflect the culture of a given moment while embodying the passion and persistence of the human spirit.

"This is a dress full of glamor and drama," Roelse says. "But it's also much more than a dress. When you look at it, there are the stories you see—and so many more below the surface."

ABOVE: Ann Lowe pictured with two of her mini prototype dresses. *Photo courtesy of Johnson Publishing Company Archive. Courtesy J. Paul Getty Trust and Smithsonian National Museum of African American History and Culture. Made possible by the Ford Foundation, J. Paul Getty Trust, John D. and Catherine T. MacArthur Foundation, The Andrew W. Mellon Foundation and Smithsonian Institution.*

RIGHT: A 1953 portrait of Jacqueline Lee Bouvier shows her in an Ann Lowe-designed wedding dress. With political considerations at play, the groom's father nixed the bride's hope for a French-inspired dress and insisted on a traditional gown from a domestic designer.

BELOW: The prototype of Bouvier's dress was made by Katya Roelse, UD instructor of fashion and apparel studies. *Photo courtesy of Winterthur Museum.*

BACKRACH, GETTY IMAGES

The *designer* of Jacqueline Kennedy's wedding dress was *virtually unknown*. Blue Hens are working to *change* that.

TONI FRISSELL, LIBRARY OF CONGRESS

9 THINGS ABOUT

JACKIE'S GOWN

SOCIETY'S BEST KEPT SECRET

Ann Lowe's enslaved grandmother and mother had no choice but to hone their sewing skills—they'd been "property" of affluent white women in need of hoop skirts. Later, as a free people, they'd monetized these talents, opening their own design business in Montgomery, Alabama, where a young Lowe internalized their techniques and developed new ones, like shaping flowers from scrap fabric.

She married as a teenager but left her husband to pursue a career, attending New York City's S.T. Taylor School of Design. Segregated to her own classroom, Lowe's designs were upheld as examples of exemplary work, and she became the first Black person to open a Madison Avenue studio.

In the 1950s, ready-to-wear clothing—pieces made for a mass market and sold in stores—defined New York City's fashion scene. But Lowe specialized in *haute couture*, one-of-a-kind items custom fit for individuals. Her garments embodied a fairytale-princess aesthetic—ethereal skirts, embroidered lace, signature flower appliqués.

"Lowe's feminine style aligned with fashions of the time," says Elizabeth Way, AS08, associate curator of the Museum at FIT and guest curator of the Winterthur exhibit. "But it was the delicacy of her work that really set it apart."

On Lowe's client list: the Rockefellers, the du Ponts and Academy Award-winning actress Olivia de Havilland. Still, the designer never became a household name like Christian Dior (a self-described admirer of Lowe) or Yves St. Laurent. That anonymity is attributable partly to Lowe's lack of advertising (she had no interest in appealing to the hoi polloi) and largely to racial prejudice—Black designers are cut from history with the celerity of a seam ripper.

Nevertheless, Lowe pressed on, motivated by her passion and also, perhaps, by fashioning her own brand of resistance. She may not have been welcome in the grandiose spaces of her white clientele but, when they wore her designs, she, too, was present.

"An important part of protest is survival," Way says. "Lowe didn't merely survive. She thrived."

AMERICA'S ROYAL WEDDING

When news that the country's most eligible Senator would wed a former debutante of the year, America waited with baited breath for the extravagant 1953 Newport affair. With political considerations at play, the groom's father nixed Jaqueline Bouvier's hope for a svelte, French-inspired dress, insisting instead on a traditional gown from a domestic designer.

01

WIGGLE BONES

In signature Anne Lowe style, the bustline on this gown provided its own support—no bra or extra padding required—but in a delicate way. The trick? Two four-inch wires called wiggle bones that were hand sewn to the gown. Roelse sourced them from Canada.

02

PETTICOAT

Creating the petticoat, a built-in skirt underneath the gown meant to provide structure, required hundreds of inches of hand basting, a sewing technique involving "big, fat stitches." Total time spent on its recreation: 49 hours.

03

30-15 SLEEVE

A signature 30-15 sleeve speaks to the 30 hours and 15 minutes it took Lowe to design it. The trick is a little gusset underneath the arm, an extra piece of fabric that allows the wearer to more easily reach up for a hug (or champagne toast).

04

BIAS CUTS

The 10 main panels of the dress were cut "on the bias," meaning they were cut at a 45-degree angle. The technique uses more fabric, but makes for a more elegant drape.

05

ROSETTES

The dress includes seven flower configurations—affectionately dubbed "rosettes" by the UD team—swirling in different directions. They took 33 hours to cut and sew.

06

HORSEHAIR

The bounce of the gown is due partly to horsehair, a half-inch polyester trim at the hem.

07

BLOSSOMS

The center of each rosette includes a hand-sculpted orange blossom. The originals were created from wax, but because of supply chain issues, Roelse got resourceful with sculpting clay.

08

TECHNIQUES

The surface of the gown alone showcases six design techniques, "so Lowe was really showing off here, pulling out all the stops in order to make this dress as special as possible," Roelse says.

09

WAIST SEAM

There is no waist seam, giving the dress a "more beautiful drape," Roelse says. (The disadvantage: This removes reinforcement, making the gown more prone to tearing over time.)

For four months, Ann Lowe labored over the dress (and those of Bouvier's 10 bridesmaids). The portrait neckline, the bouffant skirt, the pleated bodice—this was set to become the most photographed bridal gown in history.

Then, disaster. Ten days before the wedding, a pipe burst in Lowe's studio, destroying each garment. Lowe assembled a team of seamstresses and worked around the clock to recreate her designs—at a loss of $2,200 (or roughly $27,000 today). When she arrived with her ensembles, she was told to use the servants' entrance. "If you want the dresses," she replied, "this is the door I'm coming in."

After the gown sent shockwaves through the fashion world, one journalist reportedly asked the new Mrs. Kennedy for the name of her designer and heard: "a colored woman dressmaker." The First Lady later denied this, but it no longer mattered. In breathless reminiscences about the dress—discussions that resurfaced with every major political and personal event in Jackie's life—Ann Lowe's name had been lost.

A STITCH IN TIME

Resurrecting her name—and story—fell naturally to UD Prof. Katya Roelse, an acclaimed creative and technical designer who's been featured among the nation's top innovators by *Apparel* magazine. She demurred. Roelse's not a historian nor a particular devotee of First Lady fashion. But when she visited the John F. Kennedy Presidential Library and Museum in Boston, where the original is kept, her anxiety turned to wonder: "The dress was humming with mythology."

Roelse had three days to take measurements and analyze the gown's construction (How much fabric did it require? At what stage was that zipper attached?) Then, for three months, she sourced necessary material—six types of silk, hooks and eyes, boning and more. The process required 30 vendors, some based as far away as Japan.

From April through July, over the course of 250 hours, the professor toiled over her recreation, hand-sewing 70% of it. Most of the work happened in her home studio, but she enlisted three undergraduates to assist with particularly tedious jobs—sculpting the seven rosettes that swirl around the dress, and applying 10 strips of silk taffeta fabric that encircle the skirt. The latter took so long, the team labored through all eight *Harry Potter* films.

"I come from the fashion industry, where it's like: How can we make this as fast and efficient as possible?" Roelse says. "But there's no 'fast' when making an Ann Lowe garment. You can't do this with a machine."

The designer cops to moments of what-have-I-gotten-myself-into. Times when fabric swags showed up in her dreams, or she panicked at the mere thought of her cat finding his way to the gown. Roelse's most persistent anxiety? That she's not doing justice to the story of Lowe—a fear that's driven her to do arguably illogical things.

Consider the gown's petticoat. For one layer, Roelse couldn't find the exact shade of tan, so she dyed it with tea. The move was unnecessary; this part of the dress isn't even visible. But this project is meant to be an homage to Ann Lowe, and Ann Lowe never skimped on details.

"It felt like the right thing to do."

A LEGACY BY DESIGN

In life, Lowe faced profound tragedy. She acquiesced whenever wealthy clients balked at a price, and she struggled to keep her business afloat. In the early 60s, her son died in a car accident.

MODEL PROJECT

EVAN KRAPE

How difficult is dressing a mannequin? Not difficult at all—as long as you understand engineering, chemistry and physics. Because Ann Lowe's dresses were each custom made, all 40 mannequins required custom making as well—a process that began more than two years ago. "It's intense," says Kate Sahmel, AS06, textile conservator at Winterthur. "We paved new territory." First, Fashion Prof. Katya Roelse created three digital avatars—small, medium and large—to approximate the body shapes represented by the collection. Next, these computer models were sent to UD's MakerSpace, where campus engineers built them out of Ethafoam (free of dress-damaging chemicals) using a CNC router. The forms were then sent to Winterthur for modifications. For 15 to 20 hours per mannequin, conservators used specialized tools to trim from a waist here, pad a bust there, elongate a torso or broaden a shoulder. They also built bespoke arms by steaming a malleable polyester material into the required shape. To give the illusion of air under each dress—the kind created by walking—they built hoop skirts and other undergarments. Finally, they used twill tape and loose stitches to add temporary straps, so the gowns won't come apart under their own weight. "It's been a definite challenge," Sahmel says. "But a good one."

> "Ann Lowe didn't give up, and neither will I. I want to create a pathway for myself, so that I can one day be honored and recognized for my work—the way she should have been."
>
> —*KAYLA BROWN, AS24*

THIS PAGE: Kayla Brown (below) stitches part of the dress prototype; Katya Roelse and Alex Culley (bottom left) make adjustments to the finished dress. *Photos by Evan Krape.*

Shortly after, the designer developed glaucoma and cataracts that cost her vision.

In death, her story continues. Despite being excluded from fashion textbooks and passed over for solo exhibitions, Lowe's legacy has found its way to up-and-coming designers inspired by her passion for the craft.

Among this new generation of artists is Alex Culley, AS25, a sophomore who says the "countless needle pricks" he endured while recreating an Ann Lowe gown are worth the compassion he discovered while sewing in her footsteps. That education is more than a warm-and-fuzzy sentiment—it's a tool Culley will carry post college, when the Blue Hen hopes to design clothes for trans bodies.

"Without compassion, you can create something beautiful," he says. "But it won't necessarily be loved."

Making way for this type of inclusivity in the present is essential for telling a more holistic story about the fashion industry's past—and the underrepresented contributors who never got their due. It's a truth upon which Kayla Brown, AS24, has spent much time reflecting. As a Black designer, the UD senior says, it hurt to learn this history. But, in recreating one legendary gown, she's found renewed commitment to her own role in fashion's future.

"Ann Lowe didn't give up, and neither will I," she says. "I want to create a pathway for myself, so that I can one day be honored for my work—the way she should have been."

Until Brown figures out where, exactly, that pathway leads? She and her fellow Blue Hen designers want the world to know one thing:

Her name was Ann Lowe.

THE WINNING FORMULA

by Artika Rangan Casini, AS05

Winning is an inevitable source of pride, but for Blue Hen student-athletes, it's only part of the equation.

Consider Men's Lacrosse: three straight regular season championships; two straight conference tournament championships; three NCAA wins in the past two years; and an NCAA tournament game against the number-one team in the country, with a final score so formidable that even an 11-12 loss speaks more to UD grit than Duke success.

It's what the Athletics department refers to as "Blue Hen Built," the unique qualities that reflect a collective identity and philosophy: Bold, but smart. Team-first. Unafraid to fail and ever-eager to learn.

"It's about more than winning," says Chrissi Rawak. "It's asking, 'What are the behaviors that define us? What do we value, and how do we live those values every day?'"

As the sixth athletic director in UD history, Rawak views Athletics as an extension of UD's overarching excellence. To

Chrissi Rawak, athletic director

PHOTOS OF RAWAK BY EVAN KRAPE, BACKGROUND PHOTOS BY MARK CAMPBELL.

Sarah Jenkins, head coach for Women's Basketball

that end, she sees an inherent link between victory and values, knowing that a good compass will always steer in the right direction.

So, when she arrived in Newark in 2016, that's precisely where Rawak began. Her first order of business was charging the organization, more than 160 people deep, with identifying and articulating the values that would guide Delaware Athletics forward. Together, coaches and administrators developed four foundational principles: Integrity, Inclusivity, Excellence and ProUD (intentional emphasis on the last two letters).

"We value and respect tradition," says Rawak. "We don't lose sight of history, but we never stop driving toward the future."

RELATIONSHIPS WIN

Such drive begins with people. Or as Sarah Jenkins, head coach for Women's Basketball, puts it, "We expect to win, and the biggest component of that is the ability to build relationships."

That could mean writing thank you notes to the members of the custodial staff, as Jenkins does. It could be one of her players saying, "I've never heard anyone say 'I love you' as much as I've heard it here." It could be returning to UD, where Jenkins previously served as assistant coach, and seeing every head coach in the crowd of her official press conference.

"We're a family here, and it's a real one," she says. "We want to see each other succeed."

Success comes in many forms. For lacrosse alumnus Chris Guttilla, BE84, it's about expanding the Blue Hen network and investing in students. That's what led Guttilla, a self-ascribed "wise-ass Long Island kid who didn't even know Delaware was a state" to a 40-year Wall Street career in wealth management.

Guttilla had initially come to UD in 1979 to play lacrosse and study accounting, but an undiagnosed struggle with dyslexia made him quickly regret his major. It was only after speaking to the father of his teammate, Steve Shaw, BE86, that Guttilla forged a new path.

"Mr. Shaw put his arm around me and told me I was a mentor to his son. Then he asked if I liked my major, and I said, 'No, I struggle to stay focused.' He said, 'Chris, I think you are a natural-born salesman. Come to my house, spend some time with me, and I'll help you prep for an interview.'"

That conversation would become the genesis for Blue Hen Watch, a networking program launched in 2018 by Guttilla and Shaw to connect lacrosse alumni with current players. To date, the Watch has mentored more than 100 student-athletes and helped dozens more land their first jobs.

Elijah Conte, AS16, is one such beneficiary. During the program's annual dinner reception in New York City, Guttilla asked the young history major, "What do you want in a job?" Conte didn't hesitate: "To prove myself," he replied. Guttilla helped arrange a few interviews,

> *"I know what's guiding us—* **VALUES, ASPIRATIONS, PEOPLE."**
>
> —Athletic Director Chrissi Rawak

INCLUSIVITY

which Conte aced. By June, the Blue Hen had five offers.

"Chris said, 'You don't owe me anything, but if someone needs help, do the same for them,'" Conte recalls. In true Blue Hen form, Conte has paid it forward, mentoring students and most recently hiring Evan Gavalakis, BE21, as a fellow financial advisor in his firm, Stifel.

"Each player I've interacted with has been intelligent. They follow up. They ask the right questions and have the right characteristics," says Conte. "When there was an opportunity to make a new hire, it was a no brainer."

INVESTMENTS WIN

Some athletic programs are interested only in developing the sport-specific talents that come in handy on a court or field and practically nowhere else. But UD isn't interested in nurturing and supporting athletic gifts alone. UD is interested in nurturing and supporting entire individuals—fully actualized people who will go on to change the world in myriad ways that don't involve cleats or turf grass.

It's a value shared across teams.

"Some athletic departments build their programs sport by sport," says Dan Watson, HS95, deputy athletic director for sports performance and campus recreation. "Not here. We're the anti-silo. Every sport has access to the same resources."

Two of these resources are leadership programs for students and staff, known, respectively, as BLUE (Building Leaders Utilizing Education) and GOLD (Growth-Oriented Learning and Development). Both provide workshops and seminars on critical thinking, communication, diversity, equity, inclusion and belonging, and both work to grow talent from within. For UD employees, this translates to measurable professional development, with 33 promotions—nearly 20% of all full-time staff—in the past year alone.

For students, the goal is deeper, and lifelong. Led by Jenn Judy, AS02, a former field hockey player and senior associate athletic director for student-athlete success, BLUE helps students become "the best holistic versions of themselves."

Beyond the training programs are physical resources, the most prominent of which is the Whitney Athletic Center. Launched with a transformational $10 million gift from Ken, BE80, and Liz Whitney, the 90,000-square-foot facility is a hub for academics, career readiness, leadership development, strength and conditioning, athletic training, sports medicine, nutrition and wellness. In other words, it's a space that exemplifies the core values of Delaware Athletics.

"Before I came to UD, my whole life was focused on competitive sports," says Whitney, who played golf at UD. "The life lessons I took in terms of teamwork, leadership, humility with success, resilience with adversity, and, really, the connection between hard work and results played a huge role in who I am today."

His namesake building will now help propel the leaders of tomorrow. "It was designed from the very beginning to be a place where people immediately feel inspired to work and aspire to be the best for themselves and their teammates," says Rawak.

Tara Cousins, AS24, feels the energy every time she steps in. A point guard for Women's Basketball, president of the Student-Athlete Advisory Committee, and a biology major and Africana Studies minor, Cousins credits the space with embodying the broader cultural values.

"I walk in and see players from field hockey, track, soccer," she says. "It's a family here. I've met so many different people with different personalities and backgrounds. I wouldn't be who I am if it wasn't for all the love I've received from everyone in Delaware."

Ben DeLuca, head coach for Men's Lacrosse

PHOTOS OF DELUCA AND COUSINS BY EVAN KRAPE. PHOTO OF WATSON BY KATHY F. ATKINSON. BACKGROUND PHOTOS BY MARK CAMPBELL

EXCELLENCE

Tara Cousins, AS24, point guard for Women's Basketball and president of the Student-Athlete Advisory Committee

LOVE WINS

Love, in many ways, brought Ben DeLuca to UD. His wife, Laurie, HS02, spent the "four best years of her life here," and Rawak's vision and love for the program made the Men's Lacrosse head coaching offer an easy one for DeLuca to accept.

"Chrissi wants to win in all sports and compete with the best of the best," he says. "That's what Men's Lacrosse has always done. We play at the highest level."

But player evolution is slow, and growth takes time. Work requires daily investments. "We're getting our guys to understand that it's their habits that will lead to success down the line."

That could mean getting drafted to the Professional Lacrosse League, as Tye Kurtz, HS23, and Owen Grant, HS23, were earlier this year. It could also be the opportunity to play an NCAA tournament game against the number-one seed in the country, as the team did this spring.

In the locker room before, the conversation is all about belief, says DeLuca, a reminder that "we can compete against anybody and win." After the abrupt end, words are harder to come by, but the message is the same.

"We tell our guys how much we love them and how proud we are," says the coach. "We remind our guys that it's more than just the result of a game we're after; that the process to be successful—on the practice field, in the weight room, in life—is what matters most; that we're trying to produce winners more than wins."

And we are. After all, these student-athletes are Blue Hen built.

INTEGRITY

Dan Watson, HS95, deputy athletic director for sports performance and campus recreation

Bio-Whatta?!

To understand biopharmaceuticals, you need to understand UD's major role in this next-generation science

BY DIANE STOPYRA

As his father battled blood cancer, Keith Morgan, EG21, felt… intrigued.

Well, he felt scared, first and foremost. Morgan's beloved dad had been a formidable lieutenant colonel in the U.S. Army, and to see him suffer was brutal. But mixed in with the fear was this fascination. A fifth grader at the time, Morgan had a front-row seat to a lifesaving experimental therapy—specifically, a biopharmaceutical product. This drug, made from living cells, saved his dad when traditional protocols couldn't.

Years later, when it came time to choose a career path, the decision felt simple: Morgan wanted to increase accessibility to this type of extraordinary treatment. He earned a master's degree from UD in biopharmaceutical manufacturing, a new, transformative program uniquely positioned to train aspiring scientists like Morgan—those looking to disrupt the pharmaceutical industry and revolutionize healthcare as we know it. Within UD's state-of-the-art facilities, under the guidance of foremost experts from academia and industry, he honed the skill set that will help usher in a new era of medicine.

"The experience was even better than I anticipated," says the Blue Hen, now an associate scientist with AstraZeneca. "I'm so grateful for the education that's allowing me to help people in a very real way."

$229.5 billion

BIOPHARMACEUTICAL MARKET SIZE IN 2023

$356.3 billion

FORECASTED BIOPHARMACEUTICAL MARKET SIZE BY 2027

To the layperson, "biopharmaceuticals" may register as little more than a game-winning Scrabble word. But this ultra complicated science can be explained in one phrase: Leveraging biology to save lives. The strategy is relatively new. Our cave-dwelling ancestors relied on their surroundings for medicinal treatments—think herbs and tree bark. Then, in the 19th century, humans began using chemistry to recreate some of these naturally occurring molecules in drug form—hello, aspirin and Tylenol®. But what happens when treatment for a condition or disease demands the creation of much larger, much more complex molecules, like the kind that drive sophisticated operations inside the human body? This mad-sounding science is possible only through biopharmaceutical manufacturing, the alteration and growth of living cells. (For a crash-course in how, exactly, this works, see page 29.)

Advancements in DNA technology in the 1980s made this science fiction into a reality, and there have been great successes since. These therapies—so-called biologics—for everything from diabetes to heart disease, arthritis to cancer, are already saving or improving lives. In some cases, patients are cured of previously fatal conditions—the heart-wrenching pediatric ailment known as type one spinal muscular atrophy is one example. In other cases, the benefit is fewer side effects. (Chemotherapy necessarily kills

off healthy cells in addition to cancerous ones, leading to nausea and hair loss, but biologics are better at targeting only disease-causing agents.)

As exciting as these developments have been, there is reason to believe the science is just now primed for blastoff. Biopharmaceutical technologies have led to vaccines in the fight against COVID-19, which is generating increased interest in—and crucial funding for—the field. On the horizon could be treatments for chronic pain, debilitating genetic conditions and even paralysis. (See: German scientists who've restored severed spinal cord nerves in mice.)

74%

THE INCREASE IN PAY A BIOPHARMA MANUFACTURING EMPLOYEE CAN EXPECT TO MAKE OVER A TRADITIONAL MANUFACTURING EMPLOYEE

But here's the thing: Saving people is about more than inventing life-saving therapies.

"There's a big road between discovering something in a laboratory and seeing it deployed to patients," says Kelvin Lee, Gore Professor of Chemical and Biomolecular Engineering. "As this field expands at an exponential rate, we need more robust and reliable manufacturing methods, because patients are waiting."

This is where UD's new master's program comes in. Students aren't tasked with discovering next-generation medicines; they're tasked with figuring out how to scale and replicate the steps of such a laboratory process in a commercial manufacturing setting—in a safe, effective, cost-efficient and environmentally sustainable way. It's a tall order. Biopharmaceutical companies are beholden to 100 health authority organizations around the world, meaning the safety standards and regulatory hoops for something like this are (justifiably) intense. But UD's students are well equipped to navigate these challenges thanks to several factors.

KELVIN LEE, A MEMBER OF THE UD FACULTY SINCE 2007, IS WIDELY KNOWN FOR HIS WORK TO CATALYZE ADVANCED MANUFACTURING INNOVATION IN THE U.S.

>$230 billion

MONEY FUNNELED INTO BIOPHARMA RESEARCH AND DEVELOPMENT IN 2021, POINTING TO A NEW ERA OF DRUG DISCOVERY

For one, UD is home to the National Institute for Innovation in Manufacturing Biopharmaceuticals (NIIMBL). Translation: UD is home to a central hub, directed by Lee, where more than 200 partners from academia, industry, the nonprofit sector and government come together to discuss challenges in the field and how best to address them. Students on campus have a front-row seat to this discourse, and they have access to leading-edge equipment within NIIMBL meant to serve as both a testbed and training ground for new

>1,490,000 jobs

(AND COUNTING) IN THE U.S. ARE DIRECTLY SUPPORTED BY THE BIOPHARMA INDUSTRY.

PHOTOS BY EVAN KRAPE

technologies (think artificial intelligence and robotics).

"The industry is evolving so quickly, which means training needs are, too," says Millie Sullivan, the Alvin B. and Julie O. Stiles Professor and department chair of Chemical and Biomolecular Engineering. She spearheaded the development of the master's program and currently serves as its co-director. "We're not only training our students to use the most cutting-edge tools for data analysis and biopharmaceutical production, but we're also showing them how to be versatile thinkers, so they can easily pivot when new tools or products necessarily emerge."

UD didn't create its master's program in a vacuum—to develop the curriculum, Blue Hen scientists spent a year and a half collaborating with those on the biopharma-front lines. This back-and-forth with industry experts led to the development of an internship component that lasts 15 months, or one year longer than is typical. Students from all backgrounds (increasing diversity is a key tenet of the program) apply their classroom learning and receive unparalleled mentorship at one of four leading organizations in close proximity to UD: AstraZeneca, Bristol Myers Squibb, Janssen and Merck and Co. Here, within real-world R&D labs and manufacturing facilities, they refine not only their technical and regulatory knowledge, but also their sense of purpose.

"I think it's highly likely these students will change the world," says David Elkins, BE91, executive vice president and chief financial officer with Bristol Myers Squibb. "These are the individuals who are going to lead companies or research institutes in the future—the individuals who will address very serious, unmet medical needs—and I couldn't be more excited by their passion or willingness to learn."

For Morgan, the alumnus working to get healing drugs out of test tubes and into patient arms, the motivation is alive and well.

"My dad is doing great, living the retired life in Florida," he says. "And yes, it's fair to say, he wouldn't be here without biopharmaceutical technology."

KEITH MORGAN, EG21, IS ESPECIALLY INTERESTED IN MAKING LIFESAVING MEDICINES MORE AFFORDABLE FOR LOW-INCOME PATIENTS.

Biopharma 101:

If you faked an illness to avoid your high school science fair... If you think a beaker is something a duck uses to quack... If "viral contamination" sounds to you like the name of a band... In other words, if you're less than science savvy... then the idea of a crash course in biopharmaceutical manufacturing likely makes you sweat.

But—before you close your eyes, stick your fingers in your ears and start la-la-la-ing as loud as you can—hear us out: This field is not beyond a layperson's comprehension... no matter how sci-fi it sounds.

Let's start small—with the wondrous molecules known as proteins. The building blocks of life, these workhorses play a role in every one of your bodily functions. In short, they keep you alive. Your genes contain instructions for creating such VIPs (very important proteins), but, sometimes, things go awry. When proteins do not function correctly or are missing altogether, the result is disease or other chronic conditions. We aren't able to build replacement proteins using traditional chemistry, so what's a scientist to do?

Enter biopharma.

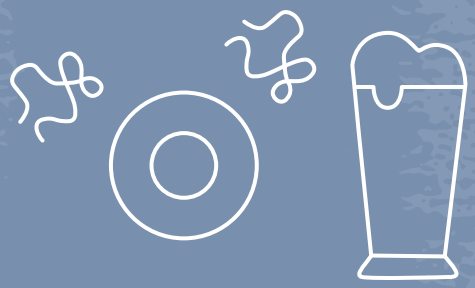
To address these ailments, scientists use living cells to create healthy replacement proteins—many of the leading biopharmaceutical products on the market today. Think monoclonal antibodies that treat COVID-19, hormones that regulate diabetes and enzymes that battle congestive heart failure and cancer. In other words: many of the extraordinary drugs keeping you or your loved ones alive and well.

But how does a protein therapy come to be?

To boost your scientific savvy, *UD Magazine* has put together a super concise, ultra simplified, doodle-friendly crash course in one common protein-therapy pathway—no doctor's note required.

STEP ONE: Take a cell from a special bank (Yes, there are facilities that specialize in the storage of mammalian cells specifically for scientific work. No, they don't impose overdraft fees. Badum ching!) Wild fact: The cells in question are often the grandchildren of cells derived originally from a Chinese hamster ovary (CHO), because they—get this!—operate similarly to the cells in a human system.

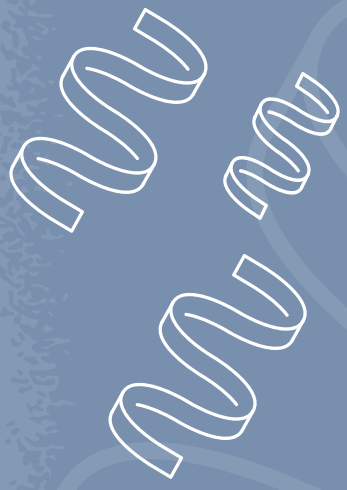
STEP TWO: Into this 'CHO' cell, insert a gene (synthesized using chemicals in a production facility) that contains instructions for producing the desired protein (which could be an enzyme, a hormone or another substance). This is called recombinant DNA technology.



STEP THREE: Place the CHO cells in a fermenter (aka, a gigantic tank filled with a nutrient "broth") to grow more. (Raise a glass: This is a process very similar to brewing beer.) If all goes well, now you have hundreds of cells that know how to make the protein you need, and they are hard at work doing just that.

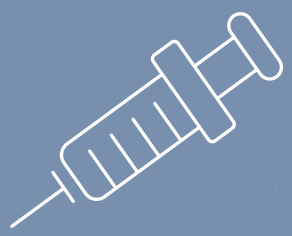
THE PROTEIN PROCESS:

STEP SIX: Place your medicine in a formulation (the technical term for a solution that contains the superstar protein, buffer components to maintain a pH similar to that of the human body and some stabilizers to help keep the whole thing from going "off" while it sits on a shelf.)



STEP FOUR: Isolate these proteins (your medicine). This is done using physical and chemical methods.

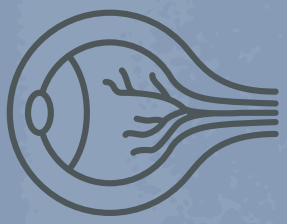
STEP FIVE: Purify your proteins (the medicine) from any contaminant molecules or cellular debris that might still be present. Typically, this involves multiple processes. (One of these steps has been sonication, or using sound waves to agitate the desired molecules until they move around like teenage girls at a T-Swift concert.)



STEP SEVEN: Deliver your medicine (often intravenously) into the arm of a patient.

NOVEL TECHNOLOGIES

While protein therapy has been the long-standing star in the wild world of biopharmaceutical clinical trials, other, more experimental processes are coming into their own—namely, cell and gene therapies. Read on for a look at these uber promising (and oft-misunderstood) technologies.

	WHAT IS IT?	HOW DOES IT WORK?	WHAT IS THIS APPROVED FOR?	WHAT MIGHT THIS TREAT IN THE FUTURE?
CELL THERAPY	Transplanting healthy, healing cells into a human body to repair damage or fight disease.	You take immune cells or stem cells (little damage-repairing machines) out of a patient's body (or a donor's body), grow more of them in a bioreactor to beef up a patient's disease-fighting army, and then inject them back into the patient. Sometimes, cells are modified with special disease-fighting protein 'armor' prior to inserting them back into the patient.	Certain blood cancers. 	Crohn's disease, multiple sclerosis, lupus, COPD, Parkinson's, ALS, and more.
GENE THERAPY	Introducing new genetic material into a human body so that a person is better able to fight disease.	You take a virus, and make it work in your favor. Remove the viral DNA that can make a person sick, so that the outer shell of the virus is now empty. Into this empty shell, place a healthy gene (synthesized in a production facility) that will replace a patient's malfunctioning one. Via injection, deliver this virus shell** into a patient's body. Allow it to deliver its cargo into the patient's cells to do the work of a missing or malfunctioning gene.	A rare eye disorder, certain kinds of hemophilia and a genetic muscle condition called spinal muscular atrophy. 	Cancer, cystic fibrosis, heart disease, diabetes and AIDS.

***UD experts are working on more efficient methods for getting these genes to the target cell, such as nanoparticle delivery.*

WHAT'S THE BIGGEST CHALLENGE?	GIVE ME SOME JAMES BOND-LEVEL TECH:	HOW EXCITED SHOULD I BE?
Automating and scaling up cell production is tricky business.	Scientists have discovered that shining a specific green laser on human stem cells derived from body fat can help them transform into whatever a body needs (skin cell, muscle cell, etc.).	Very. It's feasible that, in the next few years, this technology could be developed to treat solid tumors (think brain or pancreatic cancers).
Manufacturing enough material to treat a single patient (let alone all patients in need) is difficult—and expensive. One treatment can cost hundreds of thousands of dollars.	CRISPR-Cas9. This groundbreaking laboratory tool allows a special molecule to guide a specific enzyme to a precise section of human DNA. This enzyme then slices open the DNA so that malfunctioning genes can be removed and healthy ones can be added with greater precision than ever before.	Extremely. Hundreds of clinical trials are underway. In the next decade, more regulatory approvals for medicines treating a wide array of conditions are expected.

PROF. MILLIE SULLIVAN IS AN EXPERT IN BIOMATERIALS AND DRUG DELIVERY.

ALUMNI NEWS

HOMECOMING 2023

SAVE THE DATE, BLUE HENS!

On Saturday, Oct. 14, 2023, Delaware Football will welcome CAA newcomer North Carolina A&T for the first-ever matchup between the two schools. The game begins at 3 p.m., with a preceding Blue Hen Tailgate at UD's Hospitality Village, featuring food, drinks, games, hat giveaway, live music by Love Seed Mama Jump and more.

Other weekend events include:

- Reunion celebrations for the Classes of 1973, 1978, 1983, 1988 and 1993
- Annual tailgate and barbeque, hosted by the Black Alumni Organization, in partnership with the Center for Black Culture (Sat., Oct. 14, noon, Center for Black Culture)
- Annual Blue Hen Homecoming 5K
- Student-Athlete Alumni Tailgate

Learn more and register at udel.edu/homecoming.

STAY IN TOUCH—BY TEXT

Alumni can now text **DELAWARE** to **30203** to join the Blue Hen Texting Club. You'll receive early registration access to signature events like Homecoming and Alumni Weekend, information about alumni perks and more. Hope to hear from you soon.

PHOTOS BY MARIA ERRICO AND CHRISTOPHER GINN

MENTOR OF MINE

KATHY F. ATKINSON

Great mentors are like four-leaf clovers: lucky to have, tricky to find. But for students at the University of Delaware, the search has become a whole lot easier.

Thanks to UD's Career Mentoring Program, undergraduates are paired with Blue Hen alumni who can offer personalized advice for post-college success. For all participants, the initiative "enhances a sense of clarity in their educational and professional path," says Teresa Giacotto, BE12, associate director of alumni and constituent engagement.

So... how does it work?

Students are encouraged to fill out a survey that touches on a variety of metrics—from career aspirations to favorite hobbies. Meanwhile, alumni are given an opportunity to fill out a similar questionnaire. Answers are then submitted to the Mentor Collective, a Boston-based company that uses the information to match mentees with their most appropriate mentor. While professional similarities drive the algorithm, matches are also made based upon life experiences. A first-generation college student might express interest, for instance, in connecting with an alumni who also became first in their family to navigate the higher ed ecosystem.

Mentors and mentees are encouraged to connect at least once per month for the duration of the academic year, but the logistics (Zoom, email, phone, in-person) are left largely up to the participants. During the last cycle, the program enrolled 857 students and 400 alumni mentors—with an average of 11 conversations taking place between mentorship pairs during the academic year. "We're seeing a tremendous amount of engagement," Giacotto says.

For students, the program results in valuable internship or networking opportunities. Consider Julia Sonn, HS24, a medical diagnostics major who was able to visit the Nestlé company last year for a behind-the-scenes look at how product development works.

"This program has helped me develop career goals and gain insight into the professional world," she wrote on her LinkedIn page shortly after the experience.

For alumni, this is an opportunity to re-engage with the University and expand their professional network and skill set, while staying in touch with those Blue Hen roots.

"I have learned that I love to be of service and give back," says longtime participant Jonathan Rosenbloom, AS97. "I look forward to being a UD Mentor every year."

To join the program or learn more, visit *udel.mentorcollective.org/register/ud/mentor*.

CELEBRATING OUR ALUMNI.

In 2023, distinguished graduates were honored with the most prestigious accolades given by the University of Delaware Alumni Association (UDAA): the Alumni Wall of Fame Awards (yes, recipients have their names inscribed on an actual wall at Alumni Circle on campus); the Outstanding Alumni Awards; and the Emalea Pusey Warner and Alexander J. Taylor Sr. Awards for Outstanding Seniors. Honorees were recognized at a celebration earlier this summer.

ALUMNI WALL OF FAME AWARDS

This coveted honor, established in 1984, recognizes outstanding professional and public service achievements from graduates who are committed to both their communities and their alma mater. This year's winners are...

Udit Batra, EG91, played a crucial role in creating life-changing medicines and treatments. As president and chief executive officer at Waters Corporation, Batra continues to drive innovation and improve instrumentation for various scientific fields. He and his wife support the Batra Family Scholarship for Chemical Engineering, and the Blue Hen partnered with UD to establish Immerse Delaware, a laboratory that fosters collaboration between industry and academia for biotherapeutic manufacturing processes. In both the U.S. and India, Batra champions science education for underprivileged students.

Claire M. DeMatteis, AS87, is a proud Delawarean, whose many roles have included: secretary for the state's Department of Human Resources; counsel to Governor John Carney, BSPA84M; counsel and legislative advisor to then-U.S. Senator Joe Biden, AS65, 04H; and commissioner of the Department of Correction, the first woman to hold that role. DeMatteis has contributed significantly to the state, serving in numerous leadership positions, including UD's Board of Trustees.

William Lafferty, BE85, has made major contributions to corporate and commercial litigation. As partner and attorney at Morrison, Nichols, Arsht and Tunnell, he has represented high- profile clients, from Facebook to Google. The Legal 500 U.S. named him the number one lawyer in Delaware. Lafferty serves on UD's John L. Weinberg Center for Corporate Governance, the Board of Trustees, the Athletics Visiting Committee and Friends of the UD Library.

Michael B. Seitel, EG87, is CEO of Norwalt Design and a highly accomplished leader in engineering and manufacturing. In 2020, his company designed and manufactured a high-speed, high-volume automation system to assemble rapid test kits for COVID-19. By spring 2021, his machines could produce over 1.7 million test kits per day. As a proud Blue Hen parent, Seitel has sponsored senior-design projects, hired UD alumni, and continually helps cultivate a spirit of philanthropy his employees.

OUTSTANDING ALUMNI AWARDS

Since 1952, these awards have been presented annually to two exceptional alumni in recognition of their exemplary volunteer work on behalf of UD and/or the UDAA. This year's outstanding winners are...

Lynn Kokjohn, BE78, has a dedicated history of service to UD as a Delaware Diamonds Society donor, 25-year UD football season ticket holder, former member of the UDAA board and a volunteer on the Admission Support Team. This third-generation Blue Hen (and mother of two alumni) is a retired DuPont manager and former co-owner of Fauxbulous FX, an interior remodeling business. Now, she focuses on philanthropy and community service, serving on numerous board and commissions related to family law, education, economic development and health.

PHOTOS BY KATHY F. ATKINSON

J. Matthew Scarborough, EG96, BE97M, BE97MBA, is a Delaware Diamonds Society donor with a bachelor's in mechanical engineering, a master's in economics and a master's in business administration, all from UD. As a student, he was a distinguished Eugene du Pont Scholar and an active member of the Spirit Squad. Now, Scarborough remains involved with his alma mater through volunteer leadership roles, including chair of the Honors College Dean's Advisory Council and member of the UDAA Board of Directors. He has also hired numerous UD alumni. As president and CEO of Bridgeforce Data Quality Solutions, Scarborough has spent his career at the intersection of business and technology, assisting with organizational realignment, regulatory management, technology-enabled changes and more.

WARNER TAYLOR AWARDS

The Emalea Pusey Warner and Alexander J. Taylor Sr. Awards for Outstanding Seniors are presented annually to two students who demonstrate leadership, academic and community excellence.

Aniya Brown, ANR23, once helped birth 14 piglets. The experience she gained in ANFS101, "Animals, Science and Society," helped the Honors pre-veterinary medicine major fall even "more in love with my dream of becoming a veterinarian." At UD, she has conducted poultry research and helped found People of All Colors and Communities Together, an Honors student action committee dedicated to equality, equity and antiracism at UD and beyond.

Brenden Swanik, EG23, dreams of experiencing outer space firsthand. He has interned at the NASA Langley Research Center and Axiom Space in Houston, Texas, opportunities that sparked Swanik's desire to preserve international partnerships while fostering new avenues for private and public global aerospace cooperation. Swanik credits UD with "encouraging me to take risks, aim high and never sell myself short."

Home, sweet, home:

Tara Mangini, AS06, has reached a new chapter in her successful interior design career: her own reality TV series, *The Story of Home*, in which she and her business partner/boyfriend renovate their upstate New York farmhouse. Between laying reclaimed kitchen tiles and building her own Dutch-inspired sauna, the Blue Hen offered her best tips for surviving even the most stressful of home renovations.

Tara

Find a feeling

Pause before you purge

HEAR THE HOUSE: If you find yourself lusting after porcelain farmhouse sinks or that one down-filled loveseat with a cerulean frame, you may have already decorated your dream home in your head. But wait. "Slow down and listen to what that house is telling you," Mangini says. Take time to see what a space looks like in different weather or at different hours of day. Your vision may change.

PAUSE BEFORE YOU PURGE: As a designer, Mangini could likely bill more hours with an everything-must-go attitude. But she prefers her clients see potential in their weird tilework or wonky floors. These are the pieces that lend an all-important sense of character.

FIND A FEELING: Pinning down a color scheme is not as helpful as you may think. Neither is landing on some nebulous design style. (Mid-century modern? Bohemian? You can't sink your teeth into a general category.) Instead, Mangini recommends choosing a guidepost that sparks emotion—like a favorite city or movie. "When you get stuck, that's a super easy thing to return to."

POWER DOWN: Yes, social media can provide great inspo on everything from built-ins to balusters. But too much time scrolling will leave you questioning your instincts. "Log off for a bit," Mangini says. "Tap into what you actually want, versus what Instagram tells you to want."

BREAK THE RULES: Go ahead and paint that room lilac or cover your original hardwood with a chunky shag rug. It's your home, and "at the end of the day, you're the one who has to live there," Mangini says. Still feel pressure to do things the—quote-unquote—right way? Remember: "No one is giving you a grade."

BE KIND TO YOURSELF: Sconce versus pendant. Glossy versus matte. Maple versus rosewood. The options are paralyzing—even for pros. Mangini, who cops to feeling overwhelmed, finds the secret to successful design comes not from avoiding angsty moments of self-doubt, but embracing them. "It's all part of the process."

SOCIAL JUSTICE LEADER RECOGNIZED

Mary Ruth Warner dreamed of becoming a Renaissance woman. As the first recipient and namesake of the Department of Women and Gender Studies' Mary Ruth Warner Award, the alumna and former faculty member has achieved that and more.

Warner, AS71, 01M, was honored during the department's inaugural Ida B. Wells Lecture, which recognized her contributions to social justice on the UD campus and beyond.

Growing up in Wilmington in the 1950s, Warner attended segregated schools, and her family faced housing discrimination. During the tumultuous 1960s, Warner got involved with the change and unrest sweeping the nation, driven by the civil rights movement and the war in Vietnam.

"Across the country, campuses were erupting," Warner recalls. "Something was in the air. It was a generational moment."

In 1968, Warner became the founding president of UD's Black Student Union (BSU) amid marches, protests and campus sit-ins. Following the assassination of Martin Luther King, Jr., she presented a list of demands to the University, including increasing the number of Black professors, creating a Center for Black Culture and offering courses on African American and African history.

In response, then-President Edward A. Trabant formed an advisory committee tasked with recommending policies to improve the campus climate for Black students and other minority groups. Warner was among the key contributors to the group's seminal Scarpitti Report, which helped increase the recruitment of minority students and faculty and ensure their representation on the Board of Trustees.

PHOTOS BY EVAN KRAPE

After graduation, Warner taught at universities around the country as a folklore and music scholar. She returned to the University to earn a graduate degree in 2001 and became a professor in the Department of Women and Gender Studies, which celebrates its 50th anniversary this year.

As she envisions the future of the Mary Ruth Warner Award, she would like it to celebrate Black alumnae devoted to positive change.

"I hope future recipients have activism in their soul," she says. "I hope the award goes to someone who puts their time and energy into making others' lives better and becoming a more well-rounded person. You have to be willing to let your life go in a different direction based on the people you meet."

–Tiffany Hess-Bennette

A MOTHER'S LOVE

Sybrina Fulton

Police killed Leslie Prater, and police protected the killer of Trayvon Martin. But the respective mothers of these young, Black victims–Loretta Prater and Sybrina Fulton–want the world to know: We do not hate cops. "I'm partial to police," Fulton shared during a visit to UD, adding that her father was an officer in Miami. Prater, whose living son works in federal law enforcement, agreed: "We have good ones." Still, the two activists recognize an urgent need for change. They shared a stage in Mitchell Hall on March 7, at the University's inaugural Ida B. Wells Lecture, "Black Mothers and Police Violence," where they discussed their journey through grief and the importance of combating police brutality that disproportionately affects Black men. "People need to hear more about this, and I'm just so thankful [for] this forum so you can know what the families go through," Prater said. "There's a 15 minutes of fame that we don't want."

Loretta Prater

CLASS NOTES

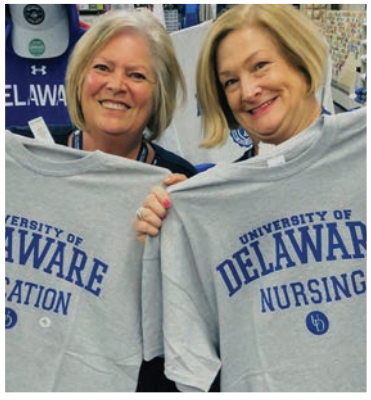
Peanut butter Ph.D.: Frank Koe recently received a patent for SpreadIt, the reusable peanut butter jar lid with a built-in spreader for no-mess sandwich making.

1970s

FRANK T. KOE, EHD73M, of State College, Pa., a professor of engineering entrepreneurship at Penn State University, was recently named a Fulbright Specialist. In May, he began consulting with the Institute of Technology of Cambodia in Phnom Penh on how to include entrepreneurship as a part of their technical programs. He has also published two articles in *Entrepreneur magazine*: "Let employees form their own groups" and "Innovation comes from intrapreneurs."

LISA GOTTSEGEN SELDOMRIDGE, HS76, of Salisbury, Md., is the new interim dean of the College of Health and Human Services at Salisbury University. She brings more than 20 years of leadership experience as chair of nursing, nursing graduate director and founding director of the Henson Medical Simulation Center. She is married to **BARRY SELDOMRIDGE, EG76**.

Former roommates **HELEN WIDDER FLOOD, EHD79**, of Lewes, Del., and **CAROLYN GUENVEUR, HS79**, of Virginia Beach, Va., recently met up in Newark to reminisce about their college days. Widder Flood is a retired teacher, and Guenveur is a retired nurse.



1980s

MICHAEL FRENCH, BE81, of Lewes, Del., retired in April from the Belfint, Lyons and Shuman public accounting firm, based in Wilmington, Del., and West Chester, Pa., where he worked for 43 years, serving as managing director and director of tax and small business.

GINA M. (DESANTIS) WILSON, AS82, of Hockessin and Fenwick Island, Del., recently published her second book, *Fearless First Year: A Student Guide for College Transition, Success and Well-Being*. She presented topics from the book to UD's Horn Entrepreneurship first-year students during the book launch week and gave each student a signed copy. Wilson is founder of System Strategies Consulting and Coaching, a certified woman-owned business in Hockessin, Del.

"I most hope to be known as a good friend, a good father and especially a good husband, who just happened to be a good CPA."

EMPOWERING GIRLS IN INDIA

In one of the poorest regions of rural India, young girls are receiving crucial medical care thanks to the efforts of **MARY CAIRNS, EHD79**.

In 2010, with her children grown and an interior decorating business underway, the Blue Hen went looking for a new project. She visited the Pardadi Educational Society, which, just 10 years earlier, had become the first school to serve girls in the remote village of Anupshahr, Uttar Pradesh. She quickly fell in love with the place and its pupils, students Cairns would come to know as her "Indian daughters."

Over the years, Cairns has spearheaded several projects for the school, including the development of the Prana Medical Clinic. Serving about 50 students per day, this facility administers free healthcare as well as a life-saving vaccination program. Now, a 20-bed extension is underway—an addition dedicated to Cairns. To learn more about the mission, visit pardadapardadi.org.

TIMOTHY GAGER, AS83, of Dedham, Mass., received recognition in April from the 2023 Mass Poetry Community Awards, which seeks to honor and celebrate poets in the Massachusetts area for their 2022 literary achievements as well as the roles they've played as "hidden heroes" in their communities. Gager released his 18th book, an anthology of his pieces spanning 20 years, selected by his publisher.

HAROLD GOODRIDGE JR., EG84, of Wilmington, Del., recently earned a 2023 Black Engineers of the Year Award in the "modern-day technology leaders" category. Goodridge is an electronics engineer with the U.S. Army Information Systems Engineering Command, which delivers strategic and operational readiness in support of engineering and information technology at Army posts, camps, stations and deployed forces around the globe.

FELICIA CARR, AS84, of Arlington, Va., was selected in December 2022 as the Alumni of the Year by the College of Humanities and Social Sciences at George Mason University, where she earned a master's and doctorate. Carr was honored for her work promoting students and faculty in this college, where she previously served as assistant dean of marketing and strategic communications.

Fond memory: As a geology major, White had the opportunity to map geological formations out West. The coolest thing he saw? "Too many to name," he says. "But I'll never forget the mountains and Badlands of South Dakota."

MARK FINN, BE85, of Towson, Md., retired from a 32-year career at T. Rowe Price, where he managed the company's value fund. In retirement, Finn has joined the Catholic Charities for the Archdiocese of Baltimore's board of trustees and will spend time in Sarasota, Fla.

Four Blue Hens recently met up for a reunion in Singer Island, Fla: **SANDY HELLING, AS87**, of Evans, Ga., recently retired from Girl Scouts as community engagement manager; **STEFANIE RYAN, HS87**, of Finksburg, Md., physical therapist; **KERI JUST, EHD86**, of Boynton Beach, Fla., autism awareness advocate and fundraiser; **LESLIE NEWBERG, AS87**, of Montgomery, Ohio, medical researcher. Says Helling: "The therapeutic talks, the laughter and the time together were priceless! We decided to make this an annual event and are already looking at destinations for next January."

During their inaugural reunion, Sandy Helling, AS87; Stefanie Ryan, HS87; Keri Just, EHD86; and Leslie Newberg, AS87, watched the Super Bowl and reminisced about sorority life.

1990s

STEVE WHITE, EOE90, of Hebron, Md., was promoted to environmental health director for Wicomico County Health Department, which handles everything from septic systems and wells to food protection and inspections. In 2022, he was also named Employee of the Year.

MICHAEL K. CHONG, AS91, of Hoboken, N.J., managing partner of MKC Law Group LLC, has been selected to receive a 2023 "Leaders in Law" award from *NJBIZ*. Honorees were chosen by a panel of independent judges for outstanding dedication to their occupation and communities.

TOBY JUROVICS, AS91M, of Santa Fe, is the author of *From Here to the Horizon: Photographs in Honor of Barry Lopez*. The book presents the work of 50 of America's leading contemporary landscape photographers in celebration of beloved Oregon naturalist Barry Lopez (1945–2020), among the most revered nature writers. Jurovics is founding director of the Barry Lopez Foundation for Art and Environment.

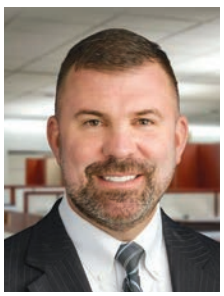
KATHY S. SCHULTZ, BE93, of Wilmington, Del., has retired as director of tax and small business from the Belfint, Lyons and Shuman certified public accounting and consulting firm. The Blue Hen logged 28 years of service with the company.

Hitting the road: Schultz is looking forward to traveling North America in a new camper van with her husband... without worrying about timesheets and schedules. She has ascended the highest points in 17 states and is hoping to scale more, with visits planned to all the national parks and Alaska.

Kathy S. Schultz, BE93

All in the family: Coleman has hired two Blue Hens who worked under the same adviser, Distinguished Professor of Kinesiology and Applied Physiology James Richards. These Blue Hens are **Tim Niiler, AS91**, of Bel Air, Md., and **Robert Hulbert, HS13**, of East Durham, N.C.

Kristen (Posey) Haase, AS96



J. Kurtis Kline, AS97, BE98M

Jane Chandlee, AS02

KRISTEN HAASE (POSEY), AS96, of Lancaster, Pa., has co-authored *Bolstering Vocabulary with Teacher Talk in the Classroom: Strategic Modeling to Elevate Students' Language.*

SCOTT COLEMAN, HS97, HS06M, BE08MBA, of Stony Point, N.Y., is director of biomechanics for KinaTrax. The Dallas-based company brings its next-generation markerless motion capture technology out of the academic arena and into the real world—specifically into 15 Major League Baseball organizations and six college baseball programs, where the technology is used to improve pitcher and hitter performance.

J. KURTIS KLINE, AS97, BE98M, of West Chester, Pa., has joined the law firm of Hamburg, Rubin, Mullin, Maxwell and Lupin as a partner in the business law department.

KARL S. MYERS, AS98, of North Wales, Pa., has been named to the Board of Governors of the Third Circuit Bar Association. The co-chair of Stevens and Lee's Appellate Litigation Practice, Myers is a leading appellate lawyer with two decades of experience arguing and briefing high-profile, precedent-setting cases.

ALISON WIDDOES, AS99, of Los Angeles, has reached her one-year anniversary as senior director, franchise strategy, with NBCUniversal in Universal Product and Experiences, focusing on preschool brand strategy for DreamWorks *Gabby's Dollhouse* and the wider preschool portfolio.

She is also pursuing an M.F.A. in creative writing from Mount Saint Mary's University.

2000s

LAUREN GINSBERG-DEVILBISS, AS01, of New York, N.Y., is a recipient of the 2023 I Love My Librarian Award. She works at PS 28, Wright Brothers School, in New York City, where she serves as library media specialist and sustainability coordinator and was recognized for embedding sustainability topics into her daily library lesson plans. There were over 1,500 nominations for this award.

HEATHER LANIER, AS00, of Psalms of Unknowing, is launching her debut full-length collection, *Psalms of Unknowing,* with Monkfish Publishing in September 2023. The collection challenges the patriarchy with an eye on contemporary issues such as gun violence, household divisions of labor and parenting in an uncertain world. Lanier is also the author of the memoir *Raising a Rare Girl,* a *New York Times Book Review* Editors' Choice. Her work has appeared in *Time, The Atlantic, The Wall Street Journal* and elsewhere. She is an assistant professor of writing arts at Rowan University, and her TED Talk, "'Good' and 'Bad' are incomplete stories we tell ourselves," has been viewed 3 million times and translated into 18 languages.

JANE CHANDLEE, AS02, of Media, Pa., has received the Morris Halle Award for Faculty Excellence in Phonology from the Linguistic Society of America. Chandlee is assistant professor at Haverford College.

CHRIS CONOLLY, BE03, of Philadelphia, has published his first children's book, *Angelo's Garden,* a story he wrote to honor the memory of his grandfather, Angelo Pinto, who "raised me like his own son."

PSALMS OF UNKNOWING BOOK EXCERPT:

My Family and I Disagree about Politics

We will always get naked for the surgeons.
Our bodies will be laid before them, dense as sandbags.

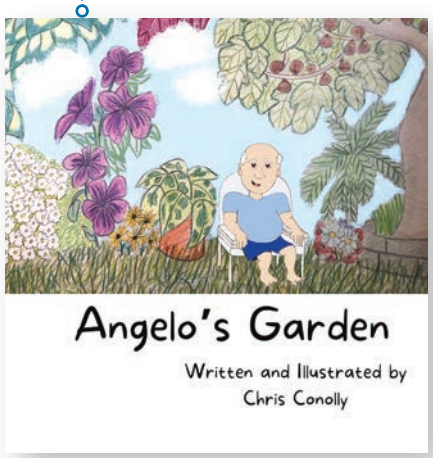
They will operate no matter who we named our leader.
They will remove gangrenous bits, slice out polyps.

Fathers will not even think to ask that they excise our next rally cry.
Mothers will not inquire if our opinions can be scooped out, too.

Our beloveds will bite nails as they wait, fall in love with our physicians,
however briefly. The stitches always disintegrate.

Skin finds itself again, like a split sea, although sometimes it takes staples.
Sometimes you have to puncture the body to hold it together.

Places she remembers: One of Alison Widdoes' favorite memories is practicing with the UD Marching Band, when at the close of the season it was tradition to sing "In my Life" by the Beatles, musicians arm in arm, swaying together "with tears in our eyes."



TANYA KANG, AS04, of Newark, Del. has self-published a book 10 years in the making: *I am Mine: Pearl Jam Fan Portraits*. Over the course of 50 shows and one decade, she asked subjects to share a favorite lyric, collecting the emotional stories behind these selections. From 1,000 concertgoers in Mexico, Canada and across the U.S., she heard all the ways Pearl Jam music has helped people through their highest and lowest moments: losing friends, overcoming cancer, finding love.

JOHN CAIN, HS04, of Branford, Conn., was appointed head coach of the Quinnipiac University club figure skating team. He also accepted a position teaching health at Foran High School in Milford, Conn.

MICHAEL D. KELLY, AS05, of Landenberg, Pa.; **KARLY A. LAUGHLIN, BE09**, of Landenberg, Pa.; **JONATHAN A. PATTERSON, BE08**, of Hockessin, Del.; and **MICHAEL E. MAST, BE07**, of Wilmington, Del., have all been promoted within the Wilmington-based Belfint, Lyons and Shuman accounting firm. Kelly, Laughlin and Patterson have each been named a shareholder/director in their respective practice groups, while Mast was promoted to principal in the firm's government practice group.

MEGAN DIVELY LEHMAN, BSPA08, and **FORREST LEHMAN, AS08**, of Williamsport, Pa., welcomed Vienna Wren Lehman on Jan. 17, 2023. She joins big brother Harrison, age 9.

Fun fact: Kang's study abroad trips to Spain and Japan gave her the confidence to "travel on my own and meet new people—the traits I needed to complete this project," she says.

Join the cause: For the TSC Alliance, Beebe has raised more than $175,000 through wine tastings, hot-sauce eating events and more. To see what's coming up near you, visit tscalliance.org.

2010s

RYAN BEEBE, BE07, of Clayton, Del., now works as director of annual giving and partnerships for the TSC Alliance, a nonprofit focused on finding a cure for Tuberous Sclerosis Complex. For the first 14 years after graduating, Beebe worked in corporate roles, but he made the professional switch in 2022, inspired by his four-year-old son, Parker, who was diagnosed with TSC at birth, leading to a heart surgery at five days old and a long battle to get seizures under control. "Ever since, I've been doing everything I can to raise awareness and fundraise to help find a cure for this rare disease," Beebe says.

KAITLIN COREY, AS10, of Harford County, Md., has been appointed to the Intelligent Transportation Society of Maryland (ITS Maryland) as a special adviser. Together with the U.S. Department of Transportation, the group supports and promotes the coordinated development and deployment of technologies that will make transportation systems safer and more efficient. Corey is a partner at the law firm Goodell DeVries, where she represents everything from trademark litigation to multimillion-dollar business transactions and tax controversy work.

REUNITED AND IT FEELS SO GOOD

It's a small world. This was the case last February for **MEG JERMAIN, EHD06**, who met a long lost college roommate in an unexpected place.

On campus, Jermain lived with **CAROLINA SANDOVAL, AS06**. They came from different worlds—Jermain from Long Island; Sandoval from Honduras—but became instant friends. After graduation, they lost touch.

Eighteen years later, while on sabbatical from teaching, Jermain joined fellow alumnus **FRANK SENA, AS06**, on a trip to Antigua, Guatemala. While touring, the two entered a shop, and Jermain gasped, instantly recognizing (and embracing) its owner: her Harrington A roommate.

Prior to the pandemic, Sandoval had once again been living in Honduras. She left for vacation in Antigua, only to discover she was pregnant and unable to leave due to COVID-19. She and her husband stayed put, opening their own tea and chocolate shop.

"The memory of this amazing twist of fate stays with me," Jermain says, adding that UD relationships transcend borders. "I live in a constant state of gratitude that I became a Blue Hen."

Drew McBee, EOE12, proposed to Emma Kate McNomee, EOE12, on the J-24 sailboat where they met before the start of their freshman year at UD, when they both joined the sailing team.

The Key Largo wedding of Nihja White, AS13, and Bridget Burns, BE14, was a Blue Hen bash.

NICK DELMONICO, BE12, of Scottsdale, Ariz., is the founder/CEO of Philly based-startup, Strados Labs, responsible for the RESP Biosensor medical device, which offers remote access to a patient's lung sounds and respiratory patterns. The company has recently partnered with Clario, a leader in technology solutions for respiratory clinical trials.

EMMA KATE MCNOMEE, EOE12, and **DREW MCBEE, EOE12**, of Oakland, Calif., were married on Sept. 11, 2021, at the Mystic Seaport in Mystic, Conn. The Double Dels say "free-range Blue Hens flocked together to celebrate."

NIHJA WHITE, AS13, and **BRIDGET BURNS, BE14**, of West Chester, Pa., were married in Ocean Reef, Key Largo, Fla., on Nov. 5, 2022. White played for the Fightin' Blue Hens, while Burns played lacrosse at UD.

ALEXANDRA ROSEN, EHD15, and **STEPHEN KANEFSKY, EHD15**, of Manasquan, N.J., celebrated their wedding with fellow Blue Hens in Point Pleasant, N.J. The celebration featured many ties to UD, including the UD fight song, "the Double Del" signature blue drink and beverages served Grotto style (with a rubber duck on top). Both sides of the wedding party included fellow UD alumni, as did the guest list.

Pictured from left to right, they are: Catharine (Pastor) Petrucci, AS15: Alexis Jankowski, AS15: Kara Lembo, BE15; Samantha (Lombardo) Verdi, AS15; Erica Holland, AS15; Elizabeth (Bernstein) Rodriguez, AS15; and Maryanne Gallagher, HS15.

Special guest: One of Samantha's college roommates, Erica Holland, AS15, affixed a veil to a Lil Blue mascot that's been present at the weddings of each Blue Hen in their friend group, women who lived on the same floor freshman year in Dickinson B and continued to live together throughout their college years.

ERIC DOWNES, HS15, of Clarksboro, N.J., recently earned the Clinic Director of the Year Award for exceeding business and productivity goals while demonstrating the ability to lead others. Downes is clinic director for the Bear and Bear East Delaware clinics of ATI Physical Therapy.

SAMANTHA (LOMBARDO) VERDI, AS15, and **ANTHONY VERDI, EG15**, of Flemington, N.J., were married on Sage Hill Farm in Flemington, N.J., on Sept. 17, 2022. The Double Dels met at UD through mutual friends, and they started dating in March 2013, during their sophomore year. They got engaged on campus.

MCKENZIE BOSCHITSCH, CHS16, of Philadelphia, was inducted into Philadelphia's Finest, a prestigious organization that recognizes young professionals who have excelled in their careers and shown exemplary leadership. Boschitsch works for the University of Pennsylvania School of Nursing as the DNP-nurse anesthesia program coordinator, and she's been tasked by Philadelphia's Finest with leading a Cystic Fibrosis awareness campaign.

Joe Carfaro, AS16, and Meredith Flaherty, AS17

MEREDITH FLAHERTY, AS17, and **JOE CARFARO, AS16**, of Boston, were married in Philadelphia in September, surrounded by Blue Hens.

TAYLOR JACOBS, EG17, of Los Angeles, Calif., is one of 22 Northrop Grumman employees recently recognized as a Science Spectrum Trailblazer by Black Engineer of the Year Award. Jacobs is a future technical leader systems engineer at Northrop Grumman, a leading global aerospace and defense technology company.

Victoria Sunnergren, AS18M

VICTORIA SUNNERGREN, AS18M, of South Burlington, Vt., is the first associate curator of Native American art for the Shelburne Museum of Vermont, the largest art and history museum in northern New England. In her new position, Sunnergren will lead the interpretation and exhibition of the museum's collection of Indigenous art and material culture and organize an exhibition highlighting The Perry Collection of Native American masterworks. Sunnergren will guide the museum's program in collaboration with an advisory board of Indigenous artists, curators and community leaders. Sunnergren is currently a Ph.D. candidate and Andrew W. Mellon Fellow at UD.

2020s

PAULINE HIMICS, AS21M, and husband John Himics, of Newark, Del., have moved the business they founded eight years ago, First Ascent, from North King Street to a larger office space at 605 North Market Street, in downtown Wilmington, Del. Clients of the digital marketing agency have included Delaware State University, Goodwill of Delaware and Delaware County, the Delaware Alliance for Nonprofit Advancement, Coalition for a Safer Delaware, Cancer Support Community Delaware and the Buccini/Pollin Group. John Himics adjuncts with the Horn program at UD, where he teaches entrepreneurial marketing.

JOEL DAVID HUFFMAN, EG23, is the fourth-generation family member to earn a UD electrical engineering degree, joining uncle **BRAD CAIN, EG95, 97M**, grandfather **DON CAIN, EG68**, and great-grandfather **EUGENE CAIN, EG32**, as the newest "Hengineer."

Joel Huffman, EG24, pictured with grandfather Don Cain, EG68, and department chair Jamie Phillips, is the fourth-generation member of his family to earn a UD degree in electrical engineering.

SHARE YOUR NEWS

The Magazine encourages alumni to send us news to share with your fellow Blue Hens. A new job, a promotion, a personal or professional award ... they're all accomplishments we want to announce. Email a note or a press release to magazine@udel.edu. Please include your hometown, graduation year and college or major.

COLLEGE DEGREE LEGEND

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EHD • EDUCATION AND HUMAN DEVELOPMENT
HS • HEALTH SCIENCES
BSPA • BIDEN SCHOOL OF PUBLIC POLICY & ADMINISTRATION

MS • MASTER'S DEGREE
PHD, EDD, DPT • DOCTORAL DEGREE
H • HONORARY DEGREE

IN MEMORIAM

JOANNA LINDSTROM KELLY, AS49, Dec. 18, 2022

CHARLES F. RALEY JR., AS50PHD, Oct. 24, 2022

JEAN PARKER FISHER, AS56, Jan. 22, 2023

CHARLES E. MCCAULEY JR., ANR59, Sept. 21, 2022

JEAN COULBOURN BROHAWN, EHD63, Jan. 18, 2023

BRUCE A. MOORE, ANR63, June 29, 2023

EDWARD SCARFE, AS63, Nov. 17, 2022

JOHN W. BAILEY II, BE68M, July 7, 2019

CHARLES S. NIGHTINGALE, BE68, May 1, 2023

KENNETH D. WEAVER, EG74, Feb. 16, 2023

IRENE FARRELL TOWT, AS75, Nov. 27, 2022

PHILIP GERARD, AS77, Nov. 7, 2022

SUZANNE SMITH BARTON, AS82, Sept. 13, 2022

FACULTY AND STAFF

MARTINA BISHOP, *custodial technician,* March 2, 2023

GERALD COLE, *professor emeritus of applied economics and statistics,* May 5, 2023

LAURA GRIFFIN, *retired assistant professor of nursing,* March 29, 2023

GEORGE HAENLEIN, *animal science professor emeritus,* April 8, 2023

ELIZABETH JENKINS, *retired clinical assistant in nursing,* April 21, 2023

JOANNE JULIAN, *retired scientist in biological sciences,* April 14, 2023

SANDY MARGERISON, *retired service coordinator in University Printing,* March 1, 2023

JULIE WATERHOUSE, *retired associate professor of nursing,* May 14, 2023

CRAIG A. WILSON, *retired assistant director of collections, Library, Museums and Press,* April 22, 2023

JAMES C. "JAY" WINDSOR, ANR61, *instructor and Cooperative Extension agent,* Feb. 1, 2023

ROBERT YOUNGER, *retired custodian,* April 21, 2023

CHASE COTTON

CHASE COTTON, EG85PHD, a knowledgeable and passionate researcher, educator and colleague in the Department of Electrical and Computer Engineering, died on March 14, 2023. He was 69.

After a long career in the communications industry, Dr. Cotton returned to UD in 2008 as a visiting scholar and later, senior scientist and professor of practice.

"Chase Cotton was truly one of a kind," says Levi Thompson, EG81, dean of the College of Engineering. "He was deeply committed to helping his students be successful and, in turn, they revered him. His collegiality, good humor and kindness won him the admiration and respect of just about everyone he met."

In the mid-1980s, Dr. Cotton began his career at Bellcore (now iconectiv), where he helped develop new algorithms and computational methods for telecommunication applications. He worked with carriers worldwide to set up ISPs and was involved with the first large scale commercial DSL deployment for consumer broadband services. While working for Sprint in the 2000s, Dr. Cotton led a team that twice set the Internet2 Land Speed World Record on a commercial production network.

Dr. Cotton brought his unique perspective to UD in 2008, where his initial focus on networking architecture evolved into a research program that combined cybersecurity and machine learning. He directed the cybersecurity minor and master's programs; developed a cybersecurity training program for engineers and scientists at Aberdeen Proving Ground; hosted summer cybersecurity boot camps; and helped launch Cyber Range, a safe environment for cyber warfare training located in the Evans Hall iSuite.

After joining UD, Dr. Cotton also revitalized the electrical and computer engineering department's senior design program by consolidating the previous program into a single two-semester course. As the lead instructor, Dr. Cotton would manage and coordinate up to 20 student projects every year and was renowned for his ability to remember and share stories about projects and students from years past when alumni or visitors would visit Evans Hall.

In 2016, when a team of seniors had the opportunity to send their project to space through the NASA's RockSat-C program, Dr. Cotton traveled with the team and even helped pay for supplies and accommodation out of his own pocket.

–Erica Brockmeier

Please share news of a loved one's passing with us at
https://inmemoriam.udel.edu

Meet Dr. Mark Bendett,

an alumnus of and entrepreneur-in-residence at University of Delaware, and a proud resident of Jenner's Pond since 2019.

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A CONVERSATION with...

Displaced by war, ***Olive Hong, EHD58***, did not graduate from high school until age 22. But the Chinese immigrant, now 95, became the first person in her family to matriculate from a university, and—despite one grueling gym class that nearly torpedoed her chances—one of the first Asian American students to graduate from UD. Four family members have followed in her Blue Hen footsteps. Here, Olive shares a bit about a legacy more than nine decades in the making.

MIKEY REEVES

The secret to such a long life?
I've always been active—racquetball, aerobics.

Do you still play?
I walk on the treadmill and lift weights.

What brought your family to the U.S.?
My father came to America at 16. In those days, Chinese people most likely opened a laundry, a restaurant or grocery store. My father did all those things! When he was 24, he went back home to marry the girlfriend he'd left behind, my mother. Then he came back to America and applied to bring her over. All five of my siblings and I were born in Massachusetts.

And then?
The Depression. When I was five, my father resettled us in Hong Kong, and, in junior high, World War II broke out, and the Japanese occupied the city. My father stayed behind with my mother and one brother. That left my older sister, Annie, and me. He didn't want us to remain in Hong Kong, where soldiers were coming to look for young girls. So, when I was 13 and she was 18, we walked to mainland China.

How is that possible?
It took 12 days. At night, we slept in marketplaces—people brought us rice.

Where did you stay once you arrived?
We walked to the village where my father is from and stayed in a little addition to my grandmother's house. We weren't able to attend school.

How did you survive?
As city folk, we didn't know how to plant things or fish. But Annie knew English, so for payment she'd write out addresses for women who wanted to send letters to their husbands in America. Also, we began knitting sweaters for money.

What happened after the war?
We found out that two of my brothers were dead. One was drafted into the U.S. Army and killed in the Philippines. Another got tuberculosis. But we were able to rejoin my parents in Hong Kong.

When did you come to the States?
In 1950, when I was 22, I took a boat on an 18-day trip. My father had suggested I continue my education in America, so I went to live with my sister, who had already left to chase her own American dream. When I first docked, men approached me. I told them, "No, I am here for school, not to get married." I didn't want to be somebody's housewife.

What was the transition like?
I was very good at math—I applied to UD's engineering program and was accepted. But my sister's husband told me engineering is not a career for a woman. What could I do? I was living with them. I switched to home economics.

Did you enjoy campus life?
I had so little time. I commuted because I had to work in the laundry that my sister and brother-in-law owned, and I did the cooking for their four kids.

Three of those kids went to UD. When you swap stories, what do you say?
I tell a story about gym class. You had to swim the length of the pool to get your diploma, but I was too scared to leave the shallow end.

But you crossed the ocean to begin a new life. What could be scarier?
The deep end. I had typhoid fever when I was eight, and I lost hearing in one ear. I had a doctor write me a note saying the chlorine might affect my one good ear, and I got my diploma.

What did you do after graduation?
I worked with emotionally disturbed children in Pennsylvania and Rhode Island. In my early 30s, I met my husband, a research chemist for the government. We moved to Rock Island, Illinois, and had two children. Each now has two kids of their own and I have two great grandkids.

Advice for incoming Blue Hens?
I got persuaded to change my major. If I'd stuck with it, maybe I'd be among the first women engineers from UD. Stick to what you think is good for you, good for the country, good for the world. Don't let people talk you out of it.

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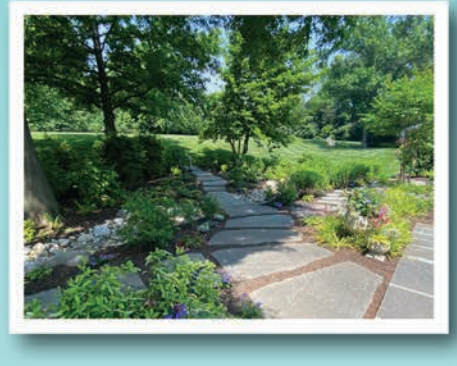

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