

# 2023-2024 PROGRAM UPDATES

















# <u>Duke Innovation & Entrepreneurship - Impact 2024</u>



# A Message From Our Director

As humankind faces complex global challenges—old problems we have long fought to solve, along with new issues brought about by emerging technologies with yet unknown repercussions—we need a generation of problem solvers who can develop and test sustainable models of addressing these challenges. We need creative, resilient innovators and entrepreneurs to effect meaningful change, small and large, on every front.

Whether students want to start a company, innovate within a large firm, commercialize their research, change the world with a social innovation, initiate public sector transformation, or pursue any number of other paths, we see what a difference it makes for them to be empowered with creativity, curiosity, a bias for action, empathy, resilience, and the tools to effect change. With an entrepreneurial mindset and competencies, our community can realize their impact by knowing how to bring an idea to life—and having the courage to move from idea to action.

In Duke I&E's history of inspiring and empowering the Duke community to take entrepreneurial action, 2024 has been a banner year. We have strengthened and scaled our programs and operations, making major advances toward our vision that all students will have an experience with Duke I&E during their time at Duke.

# OUR BOLD VISION IS TO ENGAGE EVERY DUKE STUDENT WITH DUKE I&E DURING THEIR TIME ON CAMPUS.



#### FY 2024 Highlights:

- Over the course of the academic year, we served **3,561** unique students across Duke programs, representing nearly a 30% increase from FY23. We served 30% of the undergraduate Class of 2024 and 20% of the graduate and professional school students from the Class of 2024, increases of 21% and 7%, respectively, from the Class of 2023.
- We not only engaged a higher volume of students in FY24, but we also saw repeat engagement and loyalty amongst the students we serve, as evidenced by our **7,671** total interactions with students, over 80% higher than last year.
- The Duke I&E Certificate has grown to the largest certificate on campus, with an enrollment of 816, comprised of 421 undergraduates and 395 graduate students enrolled in 2023-24.
- We served a diverse student body, with representation from 44 undergraduate majors, 33 PhD disciplines, and 7 Fuqua degree programs.
- PhD engagement continues to grow, with **271** PhD students served and **121** PhD students enrolled in the Graduate & Professional Certificate.
- We engaged **273** alumni, Duke parents, and other volunteers as mentors, classroom speakers, advisors, and advocates, an increase of 26% over 2023.
- Our event and program collaborations with the Duke Career Center, Duke Student Affairs, Duke Alumni Engagement & Development, the Christensen Family Center for Innovation at the Pratt School of Engineering, the Office of Translation & Commercialization, and others have leveraged the breadth of Duke's offerings in innovation and entrepreneurship.
- The <u>Duke I&E Luby Family Bullpen</u>, our new space at The Fuqua School of Business, has lived up to our hopes as a dynamic space where innovators and entrepreneurs from across Duke can gather to collaborate and spark new ideas.

We will relentlessly continue our foundational work, striving to grow and deepen our student engagement in pursuit of our bold goals. Over the coming years we also will focus on longer term strategic goals that complement Duke's broader institutional goals, including: expanding our undergraduate course offerings into the area of financing innovation; developing the ability to measure the long-term impact of our programs on student career outcomes; nurturing more Duke-founded ventures to successful outcomes; developing new programs to teach technology commercialization; expanding engagement in the alumni community, including launching a Duke

I&E Weekend, growing our suite of educational programs for alumni, and adding new alumni volunteer roles; and securing the resources needed to support our ambitions for growth.

In this year's annual report, I invite you to explore Duke I&E's impact over the past year in key areas:

<u>Curricular offerings:</u> With educational offerings that are interdisciplinary, team-based, problem-focused, and research-based, Duke I&E helps foster a robust, responsive, and inclusive learning community. Our educational offerings center risk-taking and collaboration as vital components of entrepreneurial action.

<u>Experiential programs:</u> With mentorship from successful practitioners, opportunities to work on real-world projects, and partnerships in the rapidly growing Triangle region and beyond, our programs outside formal course work are rooted in experience and practice.

<u>Faculty engagement:</u> When it comes to innovation and entrepreneurship, Duke faculty and researchers stand apart for the breadth, depth, and impact of their research in the field. Duke I&E leverages their work and research to inform programming, equip practitioners, and elevate Duke as a world-leading institution for innovation and entrepreneurship.

The Duke I&E Network: Duke innovators, entrepreneurs, and leaders are changing the world with their achievements across industries. In collaboration with colleagues across Duke and volunteers around the globe, we create opportunities for Duke alumni and parents to come together to learn, build connections, and inspire future collaboration.

With the support of the Duke community, there is truly no limit to what we can help our students achieve as they venture out to innovate. Thank you for your partnership in nurturing an entrepreneurial ecosystem that both inspires and empowers our community to change the world.

To Impact,

Jamie Jones, Director

**Duke Innovation & Entrepreneurship** 

Associate Professor of the Practice of Management, The Fuqua School of Business

# **Curricular Offerings**



# Entrepreneurial Action Is For Everyone

Entrepreneurship isn't just for those who want to start a company or invent a product. With education in innovation and entrepreneurship, students become better critical observers. They become more creative, able to generate novel solutions to difficult problems. They become more disciplined, more resourceful, and more likely to take action. They become better able to affect meaningful change.

We believe every Duke student can benefit from cultivating an entrepreneurial mindset and learning skills to realize their ideas. Duke I&E's interdisciplinary entrepreneurial programs maximize the value of any Duke education, adding a vital layer of attitudes, skills, and career preparedness to students' regular course of study. With our curricular offerings, we work to provide undergraduate, graduate, and professional students with transformative educational opportunities inside and outside the classroom, resources to support their innovations, and a diverse community of teammates and mentors.

749
undergraduate students took an I&E listed or cross-listed course in 2023-24

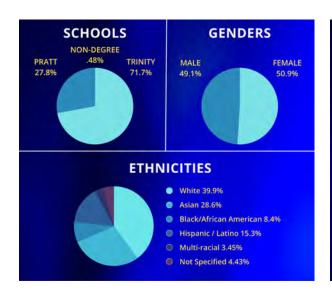
386

graduate/professional students took an I&E listed or cross-listed course in 2023-24

#### The Duke I&E Undergraduate Certificate

Duke I&E's <u>Undergraduate Certificate</u> supports students in pursuing a rigorous cross-disciplinary study of innovation and entrepreneurship that complements all majors and career goals. The Certificate pairs theory and practice, equipping students with the mindset and skills to tackle complex problems creatively; it provides a foundation in innovation, ideation, design, business fundamentals, and more, exposing students to real-world challenges and engagement with practitioners. Students tailor the Certificate to align with their interests and goals, learning to explore complex problems and develop innovative solutions.

In 2024, we worked to meet the ever-increasing appetite for the Duke I&E Undergraduate Certificate, adding new courses and experiential projects ranging from internships, to research positions, to civic engagement initiatives, to entrepreneurial ventures. With **421** students enrolled, this program's demographics reflect those of the broader undergraduate class. In the graduating class of 2024, **67** students from a wide variety of major programs earned this credential.





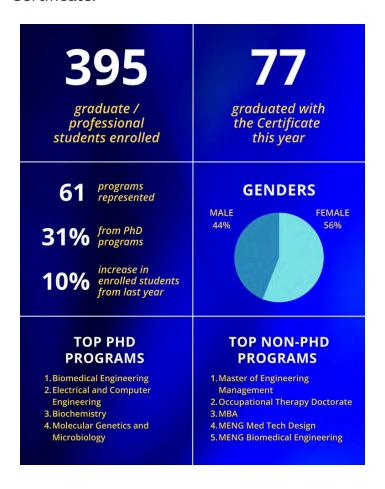
Majors represented by five or fewer students: International Comparative Studies, Cultural Anthropology,
Neuroscience, Visual and Media Studies, Environmental Science/Policy,
Global Health, Interdepartmental
Major: Visual Media Studies Computational, English, Religion,
History, Chemistry, Art History, Asian &
Mid East Studies, Program II, French
Studies, Physics, Civil Engineering,
Visual Arts, Music, Global Cultural
Studies in Literature Program, Theater
Studies, Interdisciplinary Program,
African & African American Studies

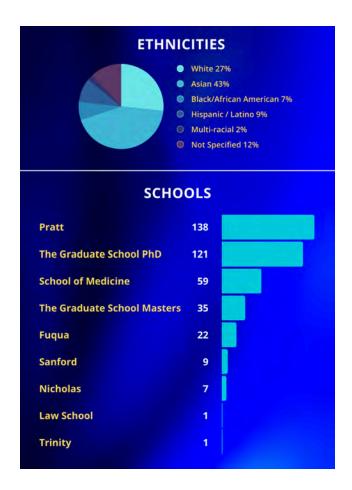
#### The Duke I&E Graduate & Professional Certificate

Through Duke I&E's <u>Graduate & Professional Certificate</u>, aspiring innovators, entrepreneurs, and founders from across Duke's graduate and professional programs can complement their course of study, support their career goals, expand their networks, and work on impactful ideas. This Certificate, which is open to almost all of Duke's graduate and professional students, can be completed in one year or over several years. In addition to taking elective courses that best support their interests, students work with peers from across Duke to learn fundamental skills to

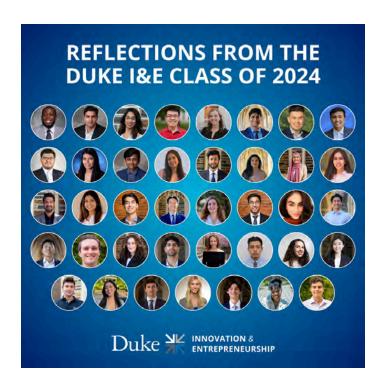
create a business plan, translate an innovation, and convey complex ideas and concepts engagingly and effectively.

This year the Duke I&E Graduate & Professional Certificate enrolled a total of **395** students from **61** programs across Duke, 121 of them from PhD programs. **77** students graduated with the Certificate.





#### Reflections from the Class of 2024



While at Duke, I&E Certificate students gained the tools they'll need to bring about meaningful change, including creativity, resilience, empathy, and foundational business skills. Hear from some of the **144** undergraduate, graduate, and professional students from across Duke who graduated in 2024 with the I&E Certificate.

REFLECTIONS FROM THE CLASS OF 2024

# **Experiential Programs**



#### Learn by Doing

Duke I&E offers a broad range of experiential programs to support students, alumni, faculty, and staff with their interests and goals—events, competitions, guest speakers, clubs, venture support, and beyond. With the entrepreneurial mindset and skills our community gains from these and other Duke experiences, they are prepared to become the next generation of impactful leaders.



1,352
graduate / professional students

2,594
total students

85
first-years participating in Project Edge

95

Duke I&E Ambassadors

## Melissa & Doug Entrepreneurs

Melissa & Doug Entrepreneurs, Duke's premier startup accelerator for students who have launched their own companies, continues to provide an exceptional experience for a select group of founders who have demonstrated both traction and commitment with their startups. To date, the **128** student founders who have gone through the program have raised more than **\$150 million**, with **12** companies making successful exits.

In 2023-24, the Melissa & Doug Entrepreneurs accelerator supported 10 student founders, providing executive coaching; mentorship from Duke alumni, parents, and other community members; travel experiences, and one-on-one conversations throughout the year with program sponsor and namesake Melissa Bernstein '87, P'15, P'16, P'26, co-founder of Melissa & Doug toys and Lifelines.



Sarah Houston '24

Aurganics is a luxuriously gentle, plant-based skincare for melanated glow-getters with sensitive skin, because healthy skin is worth more than gold (Au). The deeper someone's complexion, the more prone they are to post-inflammatory hyperpigmentation. However, many acne products today are not formulated with melanated skin in mind. Aurganics products inhibit excess melanin production at the source without compromising skin.

#### **AURGANICS**



John Xu '26

Alleviate Health works to make doctor-patient communication as efficient and easy as possible. Currently, administrative workers and doctors spend up to hours every day answering patient voicemails—time that can be better spent on helping patients in the office receive the care they need. Alleviate Health's software platform transcribes all incoming voicemails, automatically drafts responses to each question, and triages questions in terms of category and importance.

#### **ALLEVIATE HEALTH**



Arya Diwase MBA/MPP '24

Himayat is a comprehensive human resource management and employee benefits platform supporting female domestic workers (DW) and their employers in India, where currently 500 million households employ at least one DW. Through Himayat, which works on a monthly subscription basis, employers can save money, recruit, and retain consistent labor, whereas DWs can gain benefits and security.

#### **HIMAYAT**

#### Duke I&E Pop-Ups

In 2024 we piloted <u>a series of skill-building</u> workshops and value-add programs geared toward student founders and those interested in one day launching a company. A total of **34** sessions were offered last year, with topics ranging from "Generating Demand for Your Idea," to "Bootstrapping 101," to "Build a Prototype Using No-Code Tools," attended by **1,306** students from a wide range of degree programs.



Duke I&E Pop-Up: How VCs Evaluate Early-Stage Startups with Cassie Young '05

## Student Organizations

Duke I&E offers support to various student groups as they provide opportunities for students to learn through practice as well as hone their leadership skills:

<u>HackDuke</u>	The Cube
Duke Impact Investing Group	Project Edge Orientation Group
Entrepreneurship & Venture Capital Club	Private Equity & Venture Capital Club

#### **Duke Startup Showcase**

Sixty-one exciting new ventures applied to participate in the annual Duke Startup Showcase, with 36 making it to the quarterfinals and earning the opportunity to show off their ventures at event tables, 12 semifinalists pitching to a panel of distinguished judges, and 6 finalists winning more than \$100,000 in non-dilutive prizes and presenting their pitches live to an audience of more than 500 at the culminating event. MEET THE PRIZE-WINNING VENTURES



Avihan Jain '27 (left), co-founder of Bern, at the 2024 Duke Startup Showcase

"The quality of ventures and pitches at Duke's Startup Showcase was unbelievable. I don't see better ventures, traction, or pitches from some of the serial entrepreneurs who we invest in. Seeing that quality was incredibly inspiring!"—Tobi Walter, Partner, Cofounders Capital

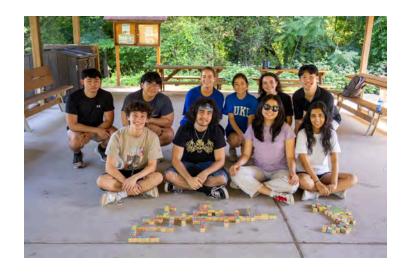
#### Fail Fest

What do a Duke football player, archaeologist, singer, and startup founder have in common? They've learned from failure. At Duke I&E's inaugural Fail Fest, students gathered to gain hard-won insights and lessons in resilience from their peers. GET INSPIRED BY FAILURES



#### **I&E+**

The I&E+ pilot program matched 8 students with 5 partner startups for 10 weeks over the summer, guiding student teams to tackle strategic projects to enhance the startups' success. <u>LEARN LESSONS FOR STARTUPS & LIFE</u>



# Faculty Engagement



# Duke Faculty Are Changing How Entrepreneurship Is Taught & Practiced

Duke's world-class faculty are shaping the next generation of entrepreneurs, making breakthroughs in understanding entrepreneurship as a discipline, and leading the charge in evolving how entrepreneurs—and all of us—learn, work, and thrive. Duke I&E leverages this work and research to inform programming, equip practitioners, and elevate Duke as a world-leading institution for innovation and entrepreneurship. We are also working to partner in emerging spaces to actively support faculty and students seeking to move their research forward.

#### Research for Entrepreneurs

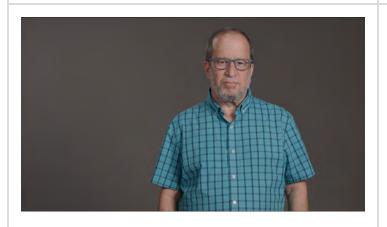
Duke I&E's Research for Entrepreneurs series engages faculty and researchers from across Duke to share how their world-leading research can be applied to the lives, careers, and futures of our community members.



#### **Lessons From Entrepreneurial Outliers**

Entrepreneurs often seek to emulate incredibly impactful businesses—Apple, Tesla, or Oprah Winfrey's Harpo Studios, to name a few. But these businesses are highly unusual in not only their successes, but also their strategies. Duke Sociology Professor Martin Ruef's research compares extremely successful business outliers with more representative samples to draw lessons for average entrepreneurs.

#### MARTIN'S RESEARCH



#### When & How to Pursue Stretch Goals

Which companies should devote time and resources to pursuing stretch ("moonshot") goals, and which would be better served by more conservative approaches? **Sim Sitkin**, Professor at Duke's Fuqua School of Business and the Sanford School of Public



#### **Motivating Leaders With Legacy**

How can we incentivize leaders to improve not just organizational outcomes in the present, but also long-term societal outcomes? Professor of Management and Organizations **Kimberly Wade-Benzoni** shares how considering one's legacy and long-term goals can help someone make decisions that benefit future generations—as well as how legacy considerations can help foster an entrepreneurial mindset.

#### KIM'S RESEARCH



# How Often Should You Check Your Progress?

Monitoring progress is vital for an organization's success—but how frequently should we check on progress towards desired outcomes? **Jordan Etkin**, Associate Professor of Marketing at Duke's Fuqua

Policy, shares research that can help entrepreneurs and innovators determine when to play it safe and when to take a chance—and how to find the courage to do either.

**SIM'S RESEARCH** 

School of Business, shares how her research can help you be intentional when it comes to tracking goals for your company and customers.

JORDAN'S RESEARCH

## Broadening Access to World-Class Business Faculty

In Business Organization & Fundamentals—a required course for all non-MBA students in the Duke I&E Graduate/Professional Certificate—students gain skills to work effectively in organizations, as well as to become impactful members of innovation teams. In 2024, students learned from guest lectures by 11 esteemed Fuqua faculty: Manuel Adelino, Ashish Arora, Jonathon Cummings, Grainne Fitzsimmons, Jon Fjeld, Sharique Hasan, Rick Larrick, Debu Purohit, David Robinson, Jack Soll, and Kimberly Wade-Benzoni.



## **Building Tech Translation Skills**

In a bootcamp co-hosted by Duke I&E, the Christensen Family Center for Innovation (CFCI), and Duke's Office for Translation & Commercialization (OTC), **30** graduate and professional students from across Duke gathered to learn through experience how to begin the technology commercialization process for innovations developed in Duke labs; we plan to expand tech transfer educational offerings for graduate and professional students across Duke to build students' skillsets so they are equipped to move technology from lab to market. READ MORE



## Building Duke Thought Leaders' Platforms

Duke I&E Senior Lecturing Fellow Aaron Dinin—instructor for the course Building Global Audiences, also known as "The TikTok course," and advisor for the Duke Creator Lab—led a year-long cohort-based program for Duke faculty and staff, educating and coaching them on how to reach audiences and build professional brands on social media.



#### Advancing Advocates' Awareness of Duke Research

Two esteemed Duke faculty members shared their research with the Duke I&E Board of Advisors during their fall and spring meetings on campus, giving some of Duke I&E's biggest advocates and advisors the chance to learn firsthand from Duke scholars. Christine Moorman, T. Austin Finch, Sr., Professor of Marketing, at The Fuqua School of Business, spoke about "Innovation imprinting: Why some firms beat the post-IPO innovation slump," and Alison Adcock, Associate Professor of Psychiatry and Behavioral Sciences and Interim Director of the Duke Institute for Brain Sciences shared research on "Treasure Maps and Memories: Tuning Brain Chemistry for Curiosity."



#### The Duke I&E Network



## A Powerful, Collaborative & Diverse Network

Success in entrepreneurship and innovation is built on a foundation of community. Every day, Duke alumni, parents, donors, and friends are making an impact by sharing their expertise, advising students, providing resources, and connecting with one another. Involvement by these

partners helps us bring real-world expertise into our programs, allows us to scale our programs with excellence, and provides pathways for the Duke community to learn from and rely on each other. We believe that by working together, we can make the Duke network even more powerful.

# IN 2024, DUKE I&E WORKED TO GROW OUR NETWORK OF ENTREPRENEURS AND INNOVATORS BY:

- Engaging more than **270** volunteers as mentors, classroom speakers, advisors, and advocates
- Hosting 13 Duke I&E in-person and virtual events to engage and connect alumni, parents, and donors
- Engaging 1,073 community members at in-person and virtual Duke I&E events
- Nurturing virtual channels for the Duke I&E community to connect, including the Duke I&E
  Network on LinkedIn (1,849 members representing 65% growth) and the Duke I&E group on
  Dukealumni.com (3,370 members)
- Presenting Duke I&E's vision, mission, faculty research, and program offerings to more than
   365 Duke alumni, parents, friends, and donors
- Communicating regularly with more than **20,000** Duke alumni, parents, and friends
- Securing investment in Duke I&E's work from **75** Duke alumni, parents, and friends

4,026

Duke alumni, parents, and donors with a Duke I&E affinity

1,517

alumni, parent, and donor touchpoints with Duke I&E

# The Ronald & Carrie Ludwig Duke in Silicon Valley Program

The Ronald & Carrie Ludwig Duke in Silicon Valley Program gives undergraduate students an intensive experience in the creation of new ventures. Over the course of a month, students gain an understanding of the resources, skills, and planning required to launch a new product or service and gain an understanding of how the startup funding landscape operates, all while immersing themselves in the Silicon Valley culture and building a network of support. In 2024, 24 students met with 65 alumni and parent volunteers/speakers and made 11 company visits.



"There's a difference between learning about a company and actually visiting it—walking the halls, talking to the employees, and enjoying the amenities. It might sound corny, but you can feel the atmosphere of each place. My favorites included Tesla, Meta, Google, and Sequoia, not because of their locations (although they were all awesome), but because of the people I met."

-Duke in Silicon Valley Student Arshaan Sayed '27

#### Convening Entrepreneurial Leaders

Members of the Duke Entrepreneurial Leaders Network (ELN), a select group of Duke students and alumni committed to founding or leading an innovation-driven startup, receive ongoing access to emerging opportunities from Duke I&E, the Office of Translation & Commercialization (OTC), the Pratt School of Engineering, and Triangle-area growth-stage ventures. The 2024 cohort includes 9 Duke students in their final year of study in law, business, chemistry, pharmacology, and electrical and computer engineering. The 10 alumni members selected for the cohort are founders and executive leaders working in software, AI, healthcare, biotech, med tech, and legal counsel. The Entrepreneurial Leaders Network now has 63 members.



MEET THE 2024 COHORT

#### Celebrating Duke Women in Innovation

Duke I&E celebrated the 2024 International Women's Day theme "Invest in Women, Accelerate Progress" by spotlighting **34** Dukeaffiliated women who have made an impact by directing capital via venture capital, investment banking, philanthropy, and other channels. Their work is enabling startups and small businesses to scale and thrive, fostering innovation, transforming industries, supporting sustainable growth, and strengthening an interconnected global economy.



MEET THE INNOVATIVE WOMEN

# Gathering Duke's Local Entrepreneurial Community

More than **50** Triangle-area entrepreneurial Duke alumni and parents gathered to forge connections, share advice, and learn more about Duke I&E. **Five** alumni also gave live pitches and spoke to the ways the Duke community could support their success.

MEET THE COMMUNITY

