

# P.C. Rossin College of Engineering and Applied Science





# WHAT IS TECHNICAL ENTREPRENEURSHIP?

Technical Entrepreneurship (TE) immerses graduate students into both sides of the innovation process—technical product development and entrepreneurial venture creation. It is a practical and academic blend that is as unique as it is powerful.

Students from all backgrounds and experience levels learn the tools and mindset of interdisciplinary collaboration and iterative problem-solving. Working together with your cohort, as well as independently, you will unlock your entrepreneurial potential through design thinking, agile project management, and hands-on projects.

TE students learn the technical aspects of innovation from ideation/design sprints, intellectual property, and prototyping to integrated product development, beta testing, and design-for-manufacturing. They build fluency in the principles and tools of venture, including stakeholder engagement, business modeling, and cash flow, as well as leading diverse teams, strategizing for finance/scale, and presenting across platforms.

Upon graduation, TE students join a tight-knit, global network of alumni—innovators who are shaking up industry, driving early-stage start-ups, revamping family businesses, running companies, and pushing the innovation envelope.



# WHY TE?

#### YOUR BACKGROUND

Engineering
Natural science
Social science
Design
Humanities
Business
Interdisciplinary degree

#### YOUR PASSIONS

"I have a specific industry I would like to explore as an innovator..."

"I have many interests and skills and I am looking to connect the dots in a meaningful way..."

"I have a product concept/ venture idea that I would like to launch and scale..."



#### TECHNICAL ENTREPRENEURSHIP



#### **Career Pathways**

#### **LAUNCH**

a new venture based on my invention

#### **JOIN**

the team of a start-up or my family business



at a larger corporation in product or business development

#### **CATALYZE**

the innovation ecosystem via leadership in consulting, government, or education

### THE TE EXPERIENCE

#### **Two Graduate Opportunities**

Technical Entrepreneurship brings together a diverse and interdisciplinary group of graduate students from across Lehigh, who learn and innovate in the context of their industry of interest, area of research, and career goals.

#### Master of Engineering (M.Eng.) in Technical Entrepreneurship

- ▶ In-person, cohort-based model
- ▶ 11-month, 30-credit graduate degree
- ► Start date of July 1
- ▶ Includes sequence of project courses for work on one's own product and venture

#### **Graduate Certificate in Technical Entrepreneurship**

- ▶ In-person, integration with M.Eng. students
- ▶ 12 credits to be completed over 3 years
- ▶ Start date of July 1, fall semester, or spring semester
- ▶ Can be integrated into other Lehigh master's or doctoral degrees

#### **Dedicated Approach**

- ▶ ELEVEN COURSES DEVELOPED SPECIFICALLY FOR TE The Technical Entrepreneurship curriculum is a cohesive set of courses in skill building, integrated product development, and venture launch and scale. A yearlong series of project courses allows graduate students to create and iterate their original work.
- ▶ CREATIVE SPACE DEDICATED TO THE PROGRAM TE students have 24/7 access to their own classroom/lab in the Wilbur Powerhouse. Amenities include a collaboration zone, mock-up station, and resource area of sample products and course texts, along with a desk dedicated to each full-time student.
- ▶ PORTFOLIO OF INDUSTRY-EMBEDDED FACULTY With degrees ranging from engineering and design to medicine and law, the portfolio of industry-embedded faculty brings cutting-edge skills in the distinct areas of product and venture, as well as practical industry experience with integrating these two distinct, yet interrelated, areas of technical entrepreneurship.
- ▶ DEDICATED TE ALUMNI WHO STAY CONNECTED Graduates of the program offer live case studies and company visits for current students, while networking with one another for career opportunities and collaboration. Scan the code to read more about TE alumni.

Technical Entrepreneurship was recognized with an Award of Excellence in Talent Development by the University Economic Development Association (UEDA).

## **WHAT SETS TE APART**

Graduate students in Technical Entrepreneurship engage in an integrated blend of hands-on experiential learning at Lehigh (the technical) and interaction with myriad partners across the innovation ecosystem (the entrepreneurship). These powerful experiences are integrated into your own personal brand through program activities and collaboration with the Lehigh Center for Career and Professional Development.

#### **Hands-on Experiential Learning**

- ▶ Wilbur Powerhouse/Lehigh Design Labs
  - » Electronics Design Studio, Additive Manufacturing Lab, Prototyping Lab
- ▶ Digital Media Studio; Emerging and cutting-edge technology
- ▶ Center for Innovation in Teaching and Learning Student Developer Lab
- ▶ Live case studies, course-based simulations, and class excursions

#### **Immersion in the Innovation Ecosystem**

#### **LEHIGH**

- ► Baker Institute for Entrepreneurship, Creativity and Innovation
- ► Lehigh@NasdaqCenter (San Francisco location)
- ► Office of Creative Inquiry
- Office of Technology Transfer

#### **REGION**

- ► Southside Bethlehem Keystone Innovation Zone
- ► Ben Franklin Technology Partners of Northeastern Pennsylvania
- ► Factory LLC/StartUp Lehigh Valley
- Philadelphia Angel Venture Fair

#### INTERNATIONAL

via Lehigh's Office of International Affairs/ lacocca Institute

- ► Transatlantic Ruhr Fellows (from Germany)
- Mandela Washington Fellows (Young African Leaders Initiative)

**LEHIGH UNIVERSITY** is located in the heart of the beautiful Lehigh Valley, the third largest metropolitan area in Pennsylvania. Home to top-notch entertainment, shopping, and restaurants, our region is also known for its seemingly endless array of opportunities for outdoor exploration and adventure.

Bethlehem is a vibrant city, rich in history and radiating small-town friendliness and feel. The arts are alive here, with exciting seasonal events, nationally recognized musical acts, comedy, art, and more. Known as the "City of Festivals," Bethlehem hosts 20-plus major festivals and over 150 mini-festivals each year.



Need more action? Plan a day or weekend trip to New York City, Philadelphia, the Pocono Mountains, or the New Jersey and Delaware beaches—all within reach by car or public transportation.



in lehigh.edu/innovate