

THE POWER OF **PERSISTENCE**

Transforming health, from
small steps to giant leaps.



Weldon School of
Biomedical Engineering

The next

GIANT LEAP

Here, every step we take is a step toward the grand challenges we'll address, the discoveries we'll make, and the healthier lives we'll make possible for all.

Today, the health industry is on the verge of a dramatic shift. As innovations in prevention, diagnostics and treatments continue to advance, the hospital is no longer the only place where care is provided. This radical transformation starts with biomedical engineers, and it starts here, at the Weldon School of Biomedical Engineering at Purdue University.

Here, we draw on the deep insights and problem-solving expertise of engineering and medicine to create the devices, procedures and materials that are shaping the future of health. We are persistent in our commitment to solving the grander challenges the world faces, delving beyond traditional approaches to invent solutions rapidly. We take discoveries from the academic laboratory directly to patients — enabling people from all walks of life to live better, safer, healthier lives.

The next giant leap starts with vision, with creativity and with new connections. It starts with Purdue biomedical engineers.

Welcome to the next giant leap in healthcare.

**in healthcare starts
with Purdue Biomedical
Engineering**

PERSISTENT

in our pursuit of invention

The scale and scope of the Purdue Engineering enterprise allows for unprecedented technological innovations in healthcare. It means we're tapping into a deep and expansive reservoir of biomedical engineering talent that's only strengthened by our translational partnerships.



A rich history of innovation

Since the day it was founded, Purdue University has been developing solutions to the problems the world faces. And today, the Weldon School of Biomedical Engineering is building on that legacy of innovation. Our faculty and researchers have invented:

- implantable cardiac defibrillators
- acoustic guidance systems for clinical tubes and catheters
- controlled-release devices for the delivery of drugs
- bioscaffolds for wound healing and tissue repair
- image reconstruction algorithms for CT systems



Translating technology into new medical products

- Nearly \$20M in total annual research awards; 25% from industry
- Federal research funding that has doubled over the past 10 years
- More than 100 U.S. patents, over half licensed to company partners
- Over \$30M in licensing royalties over the past two decades
- More than 25 companies started; over \$75M raised in venture capital
- More than 3 million patients worldwide directly helped



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**in our commitment to addressing
global healthcare challenges**

Leading the revolution in health

Tomorrow's health challenges require a new approach. One that goes beyond medicine, that brings together the best thinking in many disciplines, and tackles problems from new angles. Purdue Biomedical Engineering is at the front of that charge, bringing an integrated perspective to solve grand challenges.

Accelerating innovation for immediate application

The world's most pressing health must be addressed quickly. By bringing together our unique resources and experts, we can harness the power of collaboration to get solutions to market—and to grateful patients — faster than ever.

National and global impact

Because we sit at the intersection of deep engineering expertise and forward-looking medical care, we can have an impact where it matters most. Today, we're addressing critical needs associated with the pandemic, opioid abuse, rural healthcare access and maternal and child health, as well as an array of urban and global health challenges that can be solved via technological means.



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**in our groundbreaking education
for biomedical engineering**

Investing in the next generation of biomedical engineers

At the Weldon School, every one of our students' small steps leads to a giant leap forward in improving lives. Here, students pursue research in their areas of interest, partnering with a diverse group of illustrious faculty, getting the real, hands-on experience and critical skills to truly make a difference.

Gaining experience with every small step

Through experiential learning opportunities such as study abroad, undergraduate research, an expansive array of internships and co-op programs, and senior design projects, undergraduate students make key strides toward big discoveries and bigger ideas.

Preparing graduates to advance industries

We offer a wide range of vital connections in the medical device, pharmaceutical and biotechnology industries; critical partnerships with peer institutions; and proven job placement opportunities. Thanks to resources like these, our students grow as engineers, and emerge ready to take on meaningful careers from the moment they graduate.

Developing diverse degree options

Our master's programs — including three innovative pathways to a graduate degree and a doctoral program in auditory neuroscience — draw from a wide range of faculty and facilities. Students find inspiration from unexpected and unlikely sources, discovering revolutionary new ways to think about health and disease and how to address them.

Making a real difference through research

Through boundary-pushing research collaborations, students have many opportunities to translate their discoveries into effective medical products with a wide range of applications. Their work can offer new hope to those who suffer.

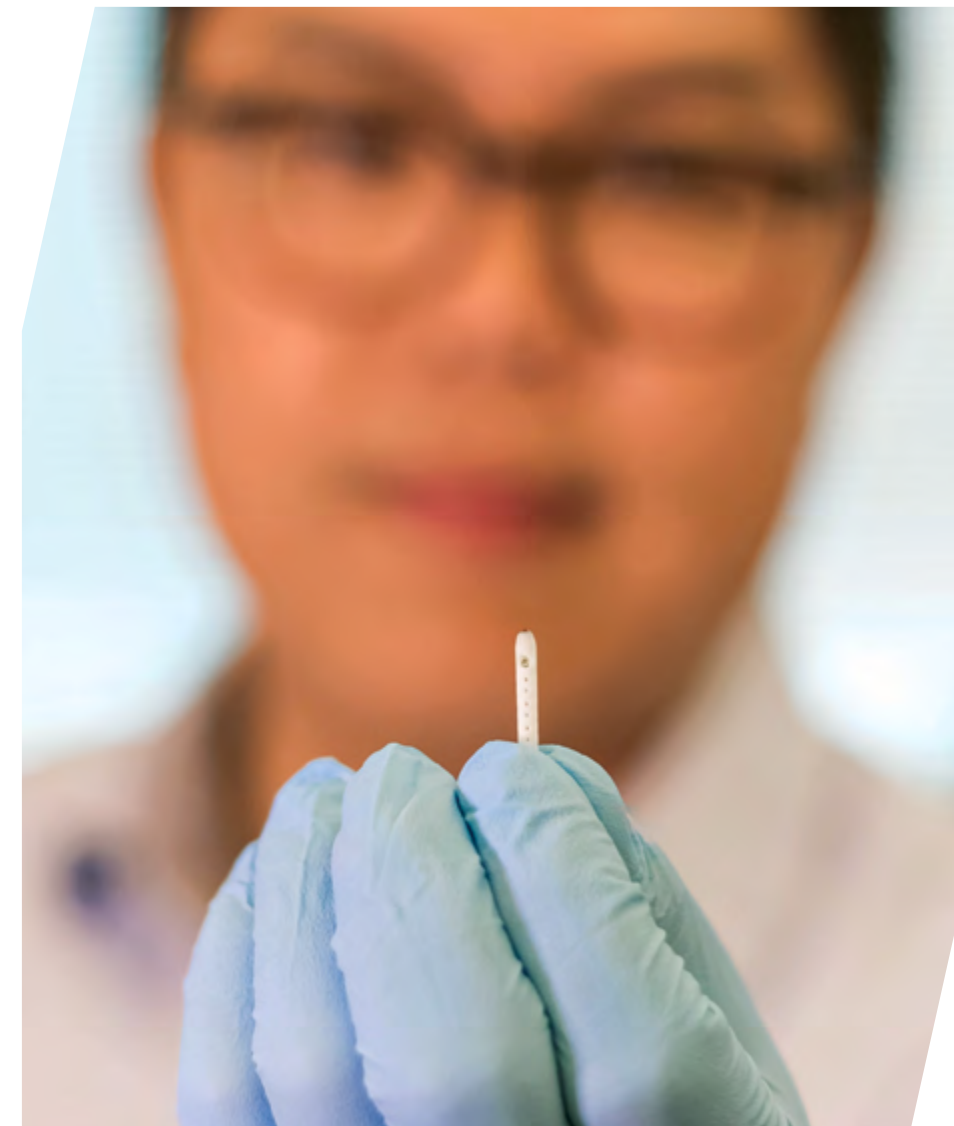
PERSISTENTLY

making smarter connections



Engaging partnerships that drive results

Here, every step we take in biomedical engineering is in lockstep with our industry partners. Through the relationships we've forged with medical device, biotechnology and pharmaceutical companies, we have a proven track record of developing world-changing solutions.



Building an expansive ecosystem

Because we're a vital hub for the Indiana life sciences industry, we can make, foster and grow connections with the companies and institutions that are working together to put ideas into action. Every step we take is deliberate, creating vital links in the chain from research to market.



Drawing on the strengths of two premier research institutions

Through a collaboration with the **Indiana University School of Medicine**, we're tapping into the vast resources of the largest medical school in the U.S. to conduct innovative graduate training and to solve healthcare challenges.



Fueling the economy of our region

Incredible growth is occurring in the field of biomedical engineering. Our work drives the industries that are building workforces in technology and innovation development, across the Midwest and beyond, and our impact is growing even more rapidly.

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building better collaborations



A culture of collaboration

A collaborative mindset is in our DNA at the Weldon School. Our students, faculty members and researchers know that we can only move ideas forward when we move as a team, and that an investment in the future is one we must make together. Here, collaboration happens in the smallest interactions and at the grandest scale.

An open, free exchange of ideas

This approach comes to life in spaces such as the Innovation Wing: a nexus for applied research, technology innovation, hands-on and online instruction, and outreach to corporate and healthcare partners. In this open-lab concept, we encourage researchers to pool their talents, share their discoveries and innovate together.

A welcoming community

There's something special about the community at the Weldon School. We've noticed there's a family feel among the people who come together in these spaces, making this a diverse environment where all perspectives are welcomed and everyone is respected.

*Join us as we make the next giant leap
in the future of healthcare.*

engineering.purdue.edu/BME