

Northeastern University

THE NEED FOR RESEARCH
AND INNOVATION SUPPORT



In 2017, **Laura Lewis**, Cabot Professor of Chemical Engineering, received a Fulbright U.S. Scholar Program grant to advance her research in magnetic materials. These materials provide functionality to devices, sensors, and motors of all kinds—and can be embedded into bridges to monitor structural integrity, and used in smart clothing for military personnel.

AN EPICENTER OF DISCOVERY

By any measure, Northeastern University is home to a robust and thriving research enterprise.

We are focused on uncovering answers to worldwide challenges in health, security, and sustainability. We are making historic breakthroughs in the discovery of drugs to treat chronic infections. We are revolutionizing technology that can withstand both natural and human-made catastrophes. And we are probing the impact of global warming on urban coastlines and other ecosystems.

But to keep investigation and knowledge creation flourishing at Northeastern, we seek the support of generous advocates who understand the importance of fueling research solutions that transform lives.

Northeastern is thoughtfully pursuing increased backing from private donors and industry sources to amplify our ability to attract government grants. With the help of these powerful philanthropic partnerships, our research initiatives can better society and bring meaningful change to the world.

MEASURES OF OUR MOMENTUM

Northeastern's research enterprise is grounded in the priority to solve our planet's most urgent problems and to improve people's lives. Our world-class faculty members are leading the charge with their path-breaking advances, both within their fields and across disciplines.

**\$160.3
million**

in external research support in 2018, up from \$48.7 million in 2006

1,646

patent applications filed by faculty and students, 2006–2018

37

federally funded research centers

THE INTERDISCIPLINARY SCIENCE AND ENGINEERING COMPLEX



Opened in 2017, Northeastern's 220,000-square foot ISEC is transforming the university's research enterprise by providing state-of-the-art shared, flexible, and adaptable core facilities, fostering collaboration across disciplines, and increasing the capacity to hire top faculty and academic leaders.

OPPORTUNITIES FOR SUPPORT

Innovation—the hallmark of Northeastern’s culture—fuels the engines of our creativity in education and research. Philanthropy is essential for enabling the kind of bold, calculated risk-taking that enriches learning, supports entrepreneurship, and furthers discovery. Support from alumni, friends, and industry and government partners will ensure that our remarkable momentum continues.



Denise Garcia, associate professor of political science and international affairs, researches international law and questions of lethal robotics and artificial intelligence; the global governance of security; and the formation of new international norms and their impact on peace and security. In 2017, Garcia was named a Nobel Peace Institute Fellow.

Seed Funding for Research. Northeastern is assembling teams of faculty from disparate fields—computer science and health-risk assessment, for example—whose lines of inquiry are yielding cutting-edge results. Seed funding from donors enables investigators to test inventive new hypotheses. Armed with preliminary data, they can compete for larger federal grants to move their research forward.

New Degree Programs Emphasizing Research. Northeastern grants degrees in more than 90 majors and concentrations, and in over 150 graduate programs. Donors can help us develop groundbreaking degree programs and research initiatives in emerging disciplines. We recently launched a doctoral program in network science, for example, and one of the first master’s degrees in regulatory affairs for drugs, biologics, and medical devices.

Modern Education-Delivery Systems. Today’s students demand instruction on site, online, and in combined formats to drive their research across disciplines. To keep pace with the needs of students diverse in age, experience, and professional interests, Northeastern is experimenting with innovative course structures and “virtual classroom” digital technologies. Donors can help us prepare students for the careers of tomorrow.

Facilities. Some centers, such as the Center for Neglected Diseases, urgently need space for the cross-disciplinary study of data and ideas, while others require modernization and new equipment. Support from individuals, foundations, and corporations for academic facilities, research centers, and institutes will keep investigators at the forefront of invention and exploration.

LEADING THE CHARGE

Northeastern’s supporters are advancing interdisciplinary faculty and student collaborations—as well as strategic partnerships with government, academia, and industry—to address global imperatives in health, security, and sustainability. Philanthropy is essential to meeting our goals in bold, dramatic ways, and it is vital to opening new, use-inspired lines of inquiry that improve lives.

656

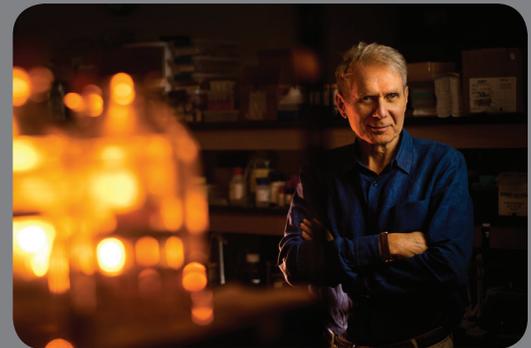
tenured and tenure-track faculty hires since 2006—many of whom lead vibrant research endeavors

252

external research awards of \$1 million or more since 2006

54

spinout companies formed by faculty and students, 2006–2018



Kim Lewis, director of Northeastern’s Antimicrobial Discovery Center and Distinguished Professor of Biology, was named a Fellow of the American Association for the Advancement of Science in 2018. Lewis has made major discoveries in the studies of persister cells, which enter a semi-dormant state, evade eradication by antibiotics, and trigger chronic bacterial infections.