WE WILL BE GLOBAL LEADERS IN THE EVOLUTION
OF ENGINEERING EDUCATION, MEASURED NOT
BY WHOM WE EXCLUDE BUT BY WHOM WE
INCLUDE AND HOW OUR COMMUNITY
SUCCEEDS. WE WILL GRADUATE THE WORLD’S
PROBLEM SOLVERS AND ADVANCE SCIENTIFIC
DISCOVERY AND INNOVATION AT SCALE.

TOGETHER, OUR POTENTIAL IS LIMITLESS

At the Ira A. Fulton Schools of Engineering, we believe that engineering is more than a discipline—it’s a mind-set, a way of looking at the world to determine how challenges can be met most efficiently, sustainably, safely, and in cost-effective ways that maximize impact and benefit those we serve. As a part of the largest engineering school in the country, our diverse faculty and students are passionate about finding innovative and entrepreneurial solutions to our most pressing challenges.
A BOLD VISION: “THE FULTON DIFFERENCE”

WE ARE AN ENGINEERING SCHOOL FOCUSED ON
STUDENT SUCCESS AND SERVING THE NEEDS
OF SOCIETY. WE ACT ON SMART IDEAS THAT WILL
TRANSFORM PEOPLE, PLACES, AND THINGS AND THAT
WILL BETTER THE WORLD, TODAY AND TOMORROW.

In the Fulton Schools of Engineering, simply put, we
build engineers and innovators. The demand
for well-prepared engineers, builders, makers,
designers, and innovators continues to grow. Our
highly regarded graduates are actively recruited
by top companies; many go on to pursue graduate
studies in medicine, law, engineering, and science;
and still others make their mark through service-
based experiences, such as the Peace Corps or
Teach for America. We give students the individual
attention they need to succeed so we can graduate
the engineers—and problem solvers—who advance
the well-being of our communities, state, and nation.

Our vision of engineering is “The Fulton Difference,”
and it encapsulates these principles:

■ **We think outside the classroom and focus on
  student success.** E2, our innovative program to
  welcome new freshmen—together with personalized
  advising, residential communities, engineering
  tutoring services, and our dedicated career
  center—is just the beginning of our commitment to
  student success. We motivate our students to take
  advantage of the many opportunities available to
develop their unique talents for research, curiosity
for global understanding, and development of an
entrepreneurial mind-set.

■ **We conduct use-inspired research,** taking
  on the great challenges of our time, advancing
  fundamental discovery, and addressing engineering
  challenges over a vast array of critical applications.
  Our faculty and students understand and value
  the important impact their research has on the
discovery of solutions and the promotion of the
economic, social, and cultural health of our planet.

■ **We engage our stakeholders,** corporate
  partners, alumni, and region in advancing ideas
for connecting our engineers across a broad
spectrum, through career opportunities for our
students to industry-driven projects for our faculty.
Our alumni are critical to our success through
not only their philanthropic support but also their
many contributions to and personal involvement
with the advancement of our ideas. The Fulton
Schools of Engineering understand, and embrace,
our obligation to the economic vitality of our region
through the workforce that we develop and train
and the research advances of our faculty.

■ **We attract faculty dedicated to transforming
  engineering education and research.** Our
  faculty embrace change, provide inspiration to
  our students, and measure the success of their
research and professional activities by the impact they have locally and globally. Our faculty include a Nobel Laureate and members of the prestigious National Academy of Engineering, National Academy of Inventors, and National Academy of Construction.

**OUR DONORS’ IMPACT**

With the support of friends like you, the Fulton Schools have grown to encompass more than 20,000 students from across the country and around the world and from diverse backgrounds. They make up 30 percent of Barrett, The Honors College, and win prestigious national scholarships upon graduation. Funding support for Fulton Schools scholarships and fellowships allows us to attract the best students and makes it possible for them to graduate without the burden of crushing debt.

As part of the culture of the Fulton Difference, we advance innovative student success programming to make the most of our donors’ investments. Funding for this programming helps us graduate students with the hands-on experience, leadership qualities, and technical skills desired by employers. Our graduates also are better poised to tackle and solve societal problems as the next generation of engineers.

Philanthropic contributions paired with innovative programming help produce students who are attacking problems around the globe even while they still are in school—from advancing dentistry with mobile dental clinics in impoverished nations to constructing tiered garden systems for regions of Africa with limited access to water and fertile soil. Through Campaign ASU 2020, you can help maximize our students’ potential to engineer solutions to global challenges.

“OUR SUPPORTIVE FULTON SCHOOLS COMMUNITY IS PHENOMENAL, BOTH ON CAMPUS AND AMONG ALUMNI AND FRIENDS. WE HAVE THE POTENTIAL TO MAGNIFY THE ENTREPRENEURIAL MIND-SET THRIVING AMONG OUR STUDENTS SO THAT THEY CAN TACKLE THE PROBLEMS CONFRONTING OUR SOCIETY.”

—Kyle Squires, Dean, Ira A. Fulton Schools of Engineering
degrees awarded in 2007–2008
1,221

degrees awarded in 2015–2016
3,536
Our knowledge-based economy depends on well-educated and highly trained technical professionals who will maintain our country’s competitive edge and who will be the key to evolving the nation’s economy. Ranked as the most innovative university in the country by U.S. News & World Report two years in a row, ASU and the Fulton Schools of Engineering are working to build a robust pipeline of professionals through advances in education platforms. We champion the philosophy of “engineers from day one”—starting with E2, our interactive orientation for freshmen students prior to the start of school. We provide support through a culture of peer mentoring, direct faculty engagement, and undergraduate teaching assistants. We boost hands-on and professional learning through freshman-dedicated instructors, innovative learning spaces, and undergraduate research experiences tackling real-world problems with faculty, industry, alumni, and foundations.

We have grown our student enrollment by more than 7,000 students since 2007, yet our focus on students has led to a freshman retention rate nearing 90 percent and a job placement rate of 87 percent upon graduation. Our students make up 30 percent of Barrett, The Honors College, and include 126 National Hispanic Scholars, 4,153 women, 3,110 Hispanics, 624 African Americans, and 184 American Indians in 2015–16.

STUDENT SCHOLARSHIPS

In 2015–16, more than 4,590 students—nearly one-third of the total student population in the Fulton Schools of Engineering—qualified for federal Pell Grants, meaning they came from families who earn
less than $50,000 annually. Together with private, state, and federal support, the University invested $21.7M to assist and advance these students to graduation, where on average students will earn $60,000 with an undergraduate degree, $75,000 with a master's degree, and $90,000 with a PhD. With our student enrollment tripling since 2003, applications for need-based and merit-based scholarships continue to grow. Unfortunately, a university education is out of the financial reach of some families. Funding for scholarships enables the Fulton Schools of Engineering not only to attract the best students but also to make it possible for thousands of students to achieve their goal of graduating. Our goal is to raise $15 million for scholarships during Campaign ASU 2020 to continue building a diverse population of bright, innovative students, advancing the pipeline of engineering talent and their engineering solutions for our region, the U.S., and the world.

GRADUATE FELLOWSHIPS
In order to attract outstanding graduate students, we must see an increase in fellowships. Private support is paramount as we compete for the best students against schools that offer first-year or even multiple-year fellowships. Our ability to recruit passionate, innovative graduate students is directly linked to endowed fellowship support. With roughly 200 new doctoral students enrolled annually in the Fulton Schools, we need to raise $10 million to draw the best and brightest graduate students to advance our goals in research, education, and ranking.

ADVANCING STUDENT COMPETITIVENESS
We need to expand undergraduate exploration beyond the classroom and the academic major, including providing stable funding for students to attend competitions and conferences. To support this effort, we seek a $1-million endowed fund for
Chemical engineering student Kaleigh Johnson wants to use engineering to make the world a more sustainable place. Her extensive undergraduate research efforts earned her one of four Barry M. Goldwater Scholarships awarded to students in Arizona in 2016.

A student in Barrett, The Honors College, she plans to pursue a doctorate in chemical engineering before working in industry.

“I want to implement synthetic biology into the production of chemicals and fuels,” Johnson says. “I hope to make a significant impact in improving the sustainability of industrial manufacturing.”

Meeting the challenge of worldwide sustainability requires academic and entrepreneurial skills. Johnson is taking on this challenge with a minor in engineering management and participation in two Fulton Schools programs: the Grand Challenge Scholars Program and Engineering Projects in Community Service. These programs increase her chemical and sustainability engineering knowledge as well as her leadership skills.

She is currently furthering her chemical engineering knowledge and contributing to the progress of sustainable industrial engineering practices through research in synthetic biology—using microorganisms to produce compounds and materials for industry—under Assistant Professor David Nielsen as part of the Fulton Undergraduate Research Initiative.

“I believe engineering has always and will continue to change the world,” Johnson says. “As our scientific knowledge continues to expand, engineers will continue to find new applications of this knowledge to improve the world and potentially change how we think, behave, and interact.”
each of our six Schools to allow students to present at conferences and successfully participate in—and win—national competitions.

In the past year alone, graduate and undergraduate students have earned top awards at conferences, including a top-10 poster award at the American Association for Cancer Research (AACR) Annual Meeting and a “best student research paper” award at the American Society of Mechanical Engineers (ASME) Power and Energy Conference. Attendance and presentations at such events not only enhance the confidence, experience, and professional network of students but also raise the profile of the Fulton Schools as a leader in cutting-edge research, innovation, and engineering education.

Outside the classroom, the Fulton Schools boast more than 60 student organizations and teams that enable students to accomplish impressive feats while building leadership skills and traveling to events to cultivate relationships essential for their professional development. Funding to support student organizations helps students gain the hands-on experience, leadership qualities, and technical skills desired by employers—students who are better poised to tackle and solve societal problems as the next generation of engineers.

**UNDERGRADUATE RESEARCH CATALYST**

Thanks to programs like the Fulton Undergraduate Research Initiative (FURI), eProjects, and senior design capstone courses, more than 1,000 Fulton Schools undergraduate students are conducting research long before they would at many peer institutions. These programs are funded partially or completely by private gifts and industry support.

This strong expansion into undergraduate research started with Ira A. Fulton's vision for FURI, now a signature component of the Fulton Difference. Funding for this initiative helps attract top student talent to ASU and builds translational experiences for students, giving them the opportunity to apply classroom learning to current research and industry issues. These experiences often come at critical moments for students as they think about moving on to industry or pursuing graduate studies and research careers. In 2016 alone, research experience was a key factor in three engineering students’ being named to the prestigious national Barry Goldwater Scholarship and Excellence in Education program.

Although endowed funds provided more than $200,000 last year to support 265 student research projects, the rapid growth of the Fulton Schools has outpaced our ability to support the enormous interest in this sought-after program. Our goal is to make it possible for all students who want to participate in undergraduate research to have that opportunity, expanding FURI and undergraduate research opportunities with endowed funds of $9 million to allow an additional 360 students to participate each year.
Private investment transformed engineering at ASU in 2003, when Ira A. Fulton’s endowment gift created the Ira A. Fulton Schools of Engineering and propelled us forward. Our culture now centers on the Fulton Difference—“engineers from day one,” with a focus on innovative engineering education, a world-class faculty, and solutions-based research. Partnerships with donors, industry, alumni, and foundations have allowed us to attract more bright, creative students from diverse backgrounds to launch their engineering careers at the Fulton Schools.

By supporting scholarships and programs for engineering students, you are investing in the Fulton Schools at a fundamental level. Your gift can directly change students’ lives and inspire them to change the future for all of us.

There has never been a greater opportunity for you to make a difference. Your generosity can provide the best education possible to the most promising engineering students from Arizona, America, and the world. By supporting Campaign ASU 2020, you share your own personal vision for the Ira A. Fulton Schools of Engineering and ensure that the values that have made ASU great continue to guide us for generations to come.

Throughout her career in aerospace and defense industries, Vicki Panhuise mentored many fellow engineers and leaders. A growing interest in advancing diversity led her and her husband to establish the Vicki and John Panhuise Engineering Award, supporting financial assistance for a variety of students, including active participants in the Women in Science and Engineering student organization. “I have a passion for helping women and other minorities reach their dreams through engineering education,” says Panhuise, an ASU trustee and CEO of Testing for National Technical Systems, Inc.
With your generous support, Arizona State University has reinvented the public research university. We are both more inclusive and more accomplished than ever, with ASU students and faculty earning unprecedented levels of recognition for their achievements. Our graduates leave here as master learners who are capable of rising to meet any new and unfamiliar challenge. ASU students, faculty, and graduates also are firmly rooted in their communities and committed to advancing the common good. Together, we have created a model for other universities to follow. Your support during Campaign ASU 2020 will help us break more new ground by raising $1.5 billion to propel our vision for higher education into the next decade and beyond.

ARIZONA STATE UNIVERSITY is a comprehensive public research university, measured not by whom we exclude, but rather by whom we include and how they succeed; advancing research and discovery of public value; and assuming fundamental responsibility for the economic, social, cultural, and overall health of the communities it serves.

Ira A. Fulton Schools of Engineering
Arizona State University

300 E. University Drive
Tempe, AZ 85281-2061
480-965-3759
giveto.asu.edu
fultonengineering@asufoundation.org