

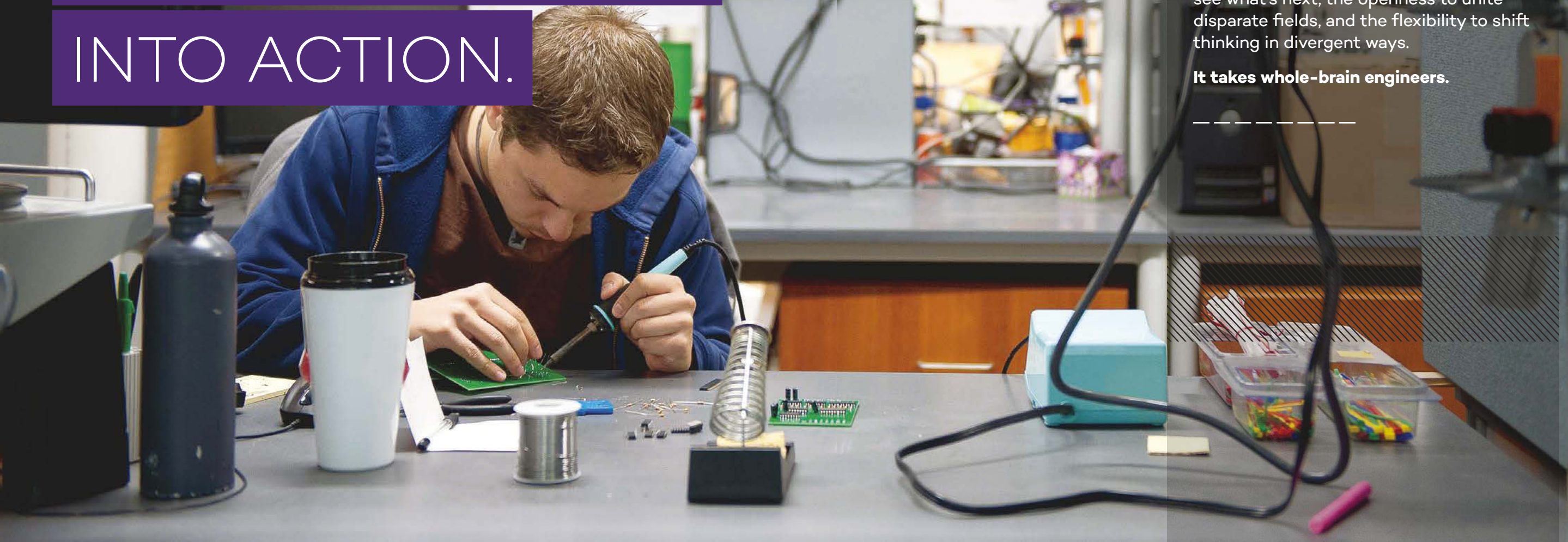
**BIG-PICTURE
THINKERS. BOLD
IDEA DESIGNERS.
TOUGH PROBLEM
SOLVERS.
REAL-TIME
COLLABORATORS.
NEW BUSINESS
STARTERS. ALL-OUT
INNOVATORS.
WHOLE-BRAIN
ENGINEERS.**

IT TAKES A DIFFERENT KIND OF THINKER TO PUT NEW IDEAS INTO ACTION.

We mean the kind of mind that spends hours taking things apart and builds something better in its place. The kind of student who excels in math but also dabbles in art or poetry. The kind of engineer who wants to solve great problems and will lead the world in a Northwestern Direction.

That takes bright minds at the intersection of careful analysis and wild creativity. It takes the foresight to see what's next, the openness to unite disparate fields, and the flexibility to shift thinking in divergent ways.

It takes whole-brain engineers.



Problem solvers
gaining new
perspective.

**This is how we're
taking the world in a
whole new direction.**

**WE
ARE
WHOLE-
BRAIN
ENGINEERS.**



In every problem we solve,
we use a systematic method
that combines left-brain logic
with right-brain intuition.
That's because with the right
mindset, anything is possible.
By framing the problem
correctly, working together,
and communicating our ideas
clearly, we create solutions
the world has never seen
before.

ASK

The right questions lead to the
most innovative solutions. Frame
the problem correctly to gain
an understanding of what really
needs to be done.

COLLABORATE

Working across disciplines
means everyone achieves more.
Solve the problem collectively
by bringing together the biggest
thinkers in relevant fields.

SHARE

Communicate your solution
effectively. Refine your
message. Inspire your clients.
Change the world.

GREAT IDEAS STICK.

We know. Our walls are covered with them. And as whole-brain engineers, we spend our days thinking up new ideas and making them real.

Could we keep senior citizens safer with automated night-lights?

The Centers for Disease Control and Prevention says one in every three adults over 65 will fall this year, many of them at night. Could a thin, pressure-sensing pad help save energy and lives?

What if an interactive game could improve motor skills in children with cerebral palsy?

Can children with cerebral palsy and paralysis improve their communication and motor skills through switch-activated toys?

Could we help preserve master artworks?

Imaging technology allows engineers to study how artists created their works—and more important, how we can help keep them vibrant for generations to come.

How do you play with otters?

Could a mazelike puzzle enrich the minds of intelligent otters?

What if our touchscreens could touch back?

A new mathematical model and experimental results on "haptic illusions" could lead to flat-screen displays that make our touchscreens actually feel like keyboards. Could this benefit the blind? Or improve dashboard technology in cars? Or make better video games?

Can a cell phone battery recharge in just 15 minutes?

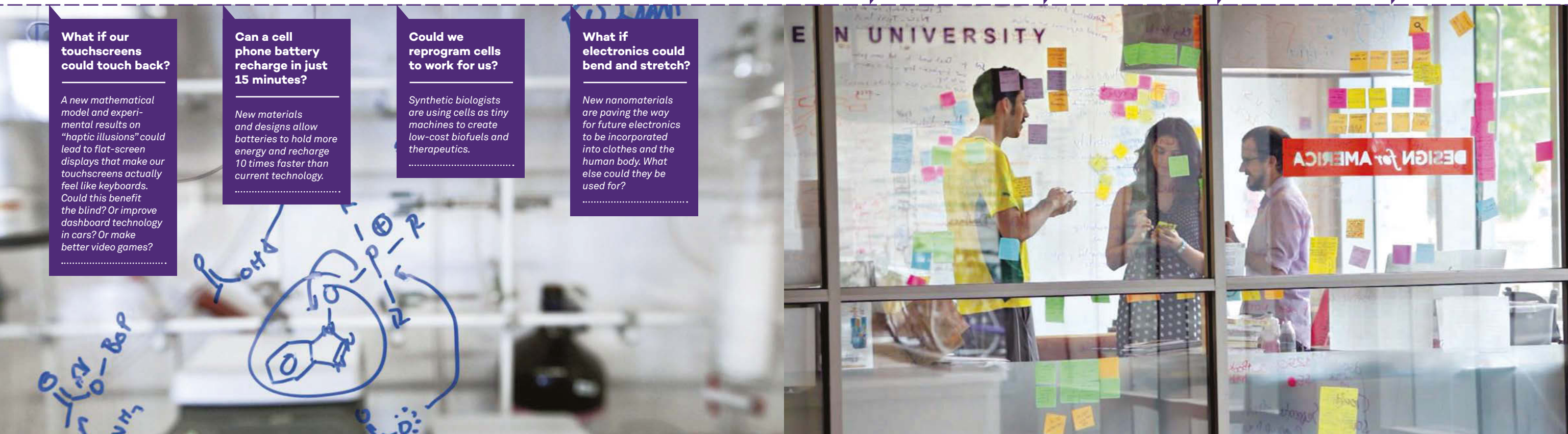
New materials and designs allow batteries to hold more energy and recharge 10 times faster than current technology.

Could we reprogram cells to work for us?

Synthetic biologists are using cells as tiny machines to create low-cost biofuels and therapeutics.

What if electronics could bend and stretch?

New nanomaterials are paving the way for future electronics to be incorporated into clothes and the human body. What else could they be used for?



NUMBERS SET THE STAGE. OUR IMAGINATIONS RUN THE SHOW.

SEGAL DESIGN INSTITUTE

WHERE EXCEPTIONAL
THINKERS IN EVERY
DISCIPLINE MEET, WE'RE
REIMAGINING WHAT IT
MEANS TO IMAGINE.

At the Segal Design Institute, you'll put cross-disciplinary ideas into action. In every program, you'll find an energizing culture of collaboration. And through a variety of engaging courses and degrees for both graduates and undergraduates, you'll strive to improve the process

of good design, drawing on skills from engineering, social sciences, and management theory. Join tomorrow's engineering innovators as you expand the research frontiers of human-centered design and integrate design thinking into all aspects of your education.

IGNITE THE POWER OF RIGHT-BRAIN THINKING.

STUDY THE PROBLEM

You'll look at every problem from a variety of perspectives, bringing together multiple points of view from different disciplines.

FRAME THE PROBLEM

You'll step back and consider the context you'll use to define the challenge you're facing and to bring focus and clarity to your thinking.

IDEATE, PROTOTYPE, ITERATE

You'll generate many possible solutions. Blue-sky time. Then you'll physically create these potential solutions and test them to see what works.

TELL THE STORY

You'll determine the best way to communicate your ideas—it's the only way to ensure that they spread.

Solving big problems starts with asking big questions. And with design thinking, you'll start by asking the right ones.

EXPERIENCE IT FIRSTHAND.

Seeing how it feels to be a practicing engineer and making an immediate impact through hands-on learning are what sets Northwestern Engineering apart. Work with real clients, solve complex problems, and deliver tangible results—all within your first year—in a transformative curriculum.

ENGINEERING FIRST®

Our innovative **Engineering First** program introduces first-year students to the fundamentals of a rigorous engineering education alongside practical applications and experiences that emphasize the power of communication. Through partnerships with organizations like the Rehabilitation Institute of Chicago, you'll address critical problems across industries, including healthcare and education, with creative solutions.

ENGINEERING FIRST CURRICULUM INCLUDES:

DESIGN THINKING AND COMMUNICATION

Students work on solving real clients' problems while strengthening communication skills so others can better understand and use the results. This two-course sequence puts students to work immediately, training them to distinguish the real issue behind a perceived problem. And as they gain proficiency in communicating, DTC students master design thinking, developing the problem-solving and presentation skills necessary to thrive in a competitive marketplace.

ENGINEERING ANALYSIS

Students engage with engineering concepts from the beginning of their first year, including linear algebra, engineering mechanics, physics, differential equations, and MATLAB programming. Each course integrates these topics with engineering applications, and MATLAB is used throughout the sequence to provide students with important tools to augment their professional development.



During your first-year Design Thinking and Communication course, you'll work directly with an actual client—an individual, an institution, or a company—to find a practical solution to a problem or challenge. Here are some recent projects designed by students:

SWIVEL SHOPPER

Created a device that helps people in wheelchairs transport groceries.

ROTAGRIP

Developed a device that helps patients rehabilitate their arms and regain motor function in their wrists.

PIVOT POWER

Created a device that secures a cordless screwdriver to a prosthetic arm.

ZIP-IT

Developed a device to help a stroke victim zip her jacket with one hand.

SCOPE-X

Developed an adjustable chair-mounted footrest for people with disabilities whose feet do not reach the floor when they sit in a standard chair.

BEDSIDE BUTTON BUDDY

Developed a device that helps track the sleeping patterns of the developmentally disabled.

HANDY LAP

Created a portable workstation that helps patients increase fingertip dexterity.

FLEXIBRELLA

Designed a flexible arm to attach an umbrella to a wheelchair.

LONE ROLLER

Created a training device for wheelchair athletes that could simulate an increase in elevation.

JARCANO

Created a utensil that helps users open jars with just one hand.

SERVICECELL

Created a device that helps users with vision and fine-motor-skill impairments use small phones and keypads.

DISPENSETRON

Designed a pill dispenser for a client who does not have use of his arms or legs.

BACKPACK BUDDY

Created a backpack to better hold a special-needs child's communication device.

BASS GRABBER

Designed a fishing rod attachment for a quadriplegic fisherman.

WHAT CAN YOU DO IN YOUR FIRST YEAR AT NORTHWESTERN ENGINEERING?





FARLEY CENTER

BOLD THINKERS PUTTING BIG IDEAS INTO ACTION.

The Farley Center for Entrepreneurship and Innovation teaches you how to turn big ideas into successful business ventures. The unique curriculum includes courses, advising, and mentorship that will help you apply your thinking across the innovation life cycle—from ideation to prototyping and business plan development.

STUDENT STARTUPS



ADAPTLY

Started by Northwestern undergraduate Nikhil Sethi in 2010, Adaptly provides technology to help companies advertise across many platforms. With more than \$13 million in funding and an office in New York City, Adaptly streamlines marketing to offer a complete solution for all industries.



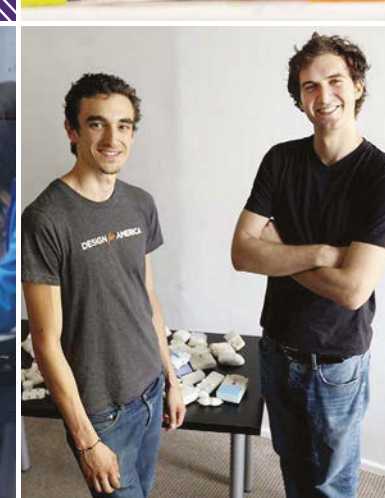
INNOBLATIVE DESIGNS

Curtis Wang was an engineering undergrad when he cofounded Innoblative Designs, a company that was recently named one of 15 Chicago Startups to Watch by *ChicagoInno*. Wang helped develop a novel medical device specifically designed to fit the postlumpectomy cavity. The device improves patient outcomes by targeting and destroying residual cancer cells through non-ionizing energy delivered to the breast tissue.



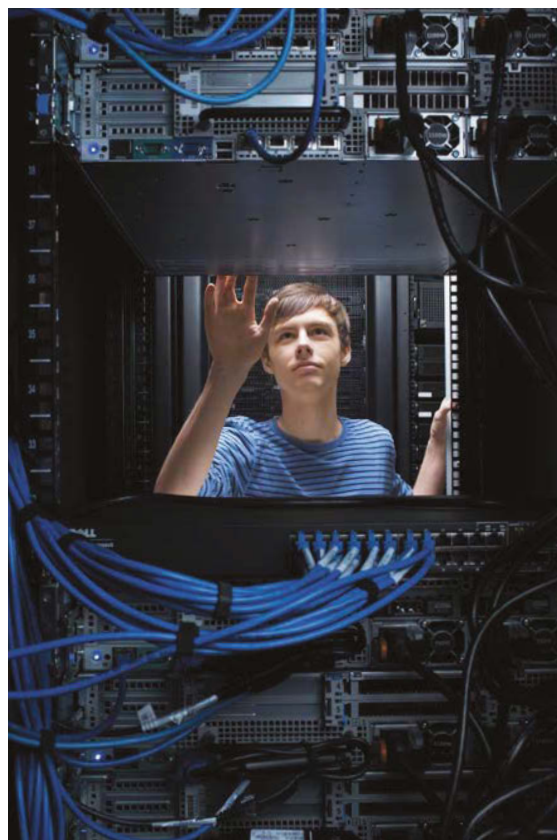
SPROUTTEL

Undergraduates in Design for America, a network of student-led studios, created Sproutel in 2012, along with its flagship product, Jerry the Bear. By playing with this mechatronic animal and its game-based apps, kids learn how to manage their diabetes and their overall health.



SWIPESENSE

In 2009, undergrads in Design for America developed SwipeSense, a portable hand sanitizer that clips onto a healthcare practitioner's belt or pocket. The group also participated in the *Wall Street Journal* Startup of the Year competition in 2013 and recently received \$9.6 million in funding.



CENTER FOR LEADERSHIP

Through the Center for Leadership at Northwestern Engineering, you'll develop the collaboration skills, focus, and resilience to become a strong leader. The center's offerings include teamwork and leadership assessments within many engineering courses. Through classes and programs, you'll have the opportunity to take on a leadership project of your own.

CAREER DEVELOPMENT

At the **Office of Career Development**, you'll acquire tools for success throughout your career. Through the Walter P. Murphy Cooperative Engineering Education Program, one of the most prestigious in the country, you'll alternate periods of academic study with full-time, paid work experience. And through internships, research experience, and service learning opportunities, you'll extend your career plan beyond the classroom, out into the workforce and the larger world.

PERSONAL DEVELOPMENT

Fostering whole-brain engineers means empowering students to take ownership of their learning and personal growth.

AT NORTHWESTERN ENGINEERING, PERSONAL DEVELOPMENT MEANS:

Exploration of a wide range of experiences and extracurricular activities

Engagement in meetings and seminars where students discuss work and development

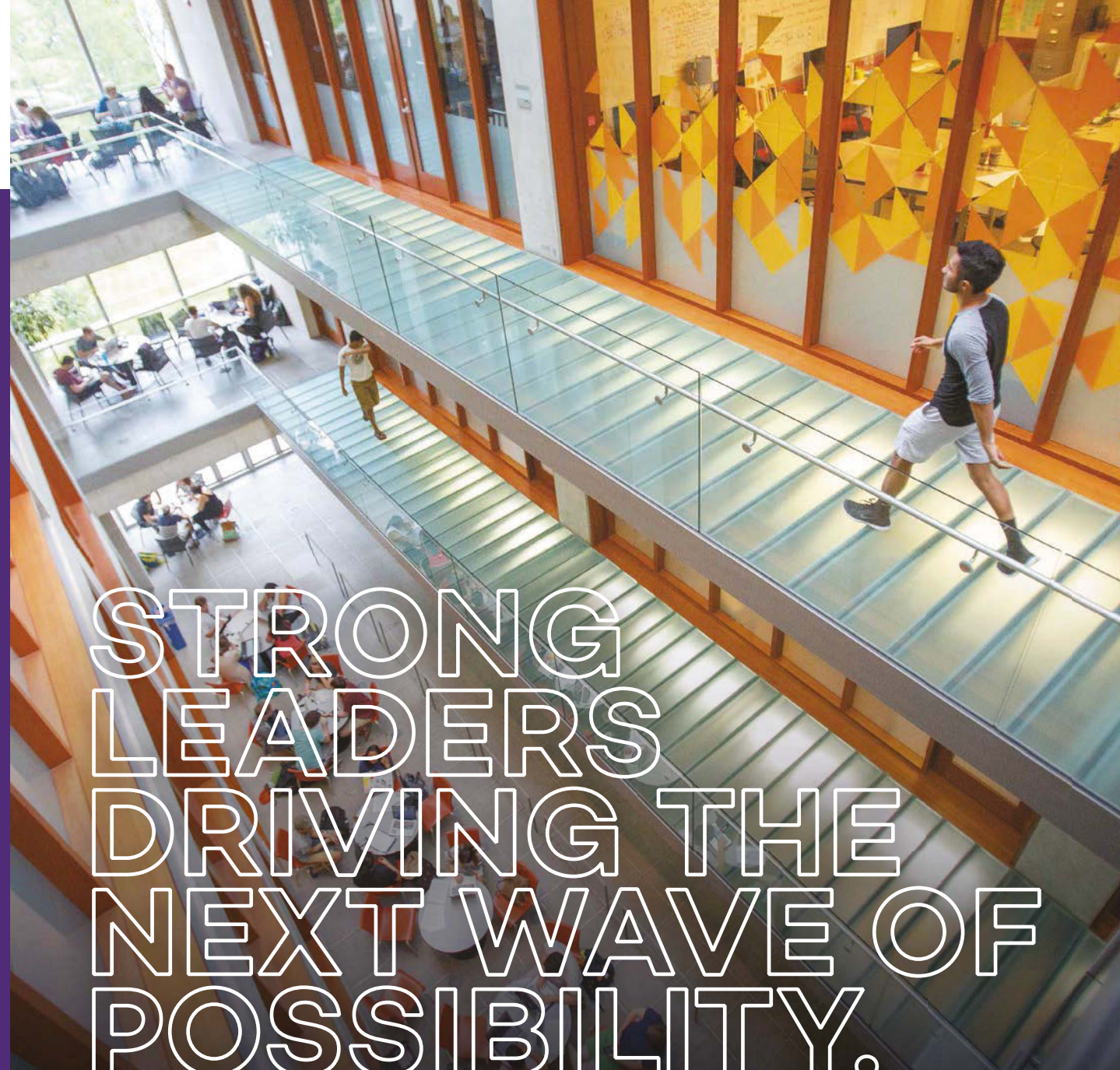
Transformation by critically examining and reflecting on experiences



JOHN FRANKLIN

Computer Engineering and Music Composition

Between interning at Google's New York office and developing an interactive game funded by Disney, Franklin has engaged people around the globe with his work at Northwestern Engineering. Intended to promote healthy living, his jump-based video game could soon be empowering visitors at the Walt Disney World theme park in Orlando to live healthier lives. And through his internship at Google as a software engineer, he's gained the invaluable hands-on experience that will guide his career path after graduation.



AT THE COLLISION OF CAREFUL ANALYSIS AND WILD CREATIVITY, WE'RE SOLVING GLOBAL PROBLEMS.

UNDERGRADUATE RESEARCH

We believe that between what's known and what hasn't been tried yet, there's untapped possibility. That's why we provide a powerful hands-on research experience so students can develop an advanced understanding of today's complex engineering and scientific challenges. Undergraduate research begins as early as the first year, with

students collaborating alongside world-class faculty and some of the brightest minds in engineering. And because our faculty members are on the forefront of groundbreaking innovation, it's common for our students to be part of teams that publish notable results, moving engineering theory and practice forward.

ENGINEERING THE FUTURE OF CLEAN ENERGY

SARAH RAPPAPORT

Materials Science and Engineering, Music

Through undergraduate research focusing on electrocatalysis, Sarah Rappaport put her interest in creating clean energy to work. She prepares samples of MoS_2 , analyzing their promising applications in hope of creating what she calls a "deconstructed battery" to catalyze reactions.

275

MORE THAN 275 LABS, CENTERS, AND AFFILIATE PROGRAMS INVOLVE STUDENTS IN RESEARCH.

24

NORTHWESTERN ENGINEERING IS HOME TO 24 MAJOR RESEARCH CENTERS AND PARTNERSHIPS.

ERIC YANG

Biomedical Engineering

A recipient of a McCormick Summer Research Award, Eric Yang spends his time in the lab exploring non-invasive diagnostics for breast cancer patients. Yang hopes to develop a way to filter out circulating tumor cells in late-stage patients to help control the spread of the disease and save lives.

SAMUEL DAVIDSON

Chemical Engineering

From a young age, Samuel Davidson knew he wanted a career in research. At Northwestern Engineering, he puts his passion to work studying common and essential enzymes found in the human body. He hopes that groundbreaking treatments for disease will result from his novel approach, which involves cell-free protein synthesis and amber suppression. In the meantime, he's developing skills in the lab that will help him publish his research and improve his chances of getting into a highly selective graduate program.

THE JOURNEY FROM IDEA TO BREAKTHROUGH IS NEVER A SIMPLE PATH.

SOME OF OUR KEY COLLABORATORS

Argonne National Laboratory

Through the Northwestern-Argonne Institute for Science and Engineering, our faculty regularly partner with researchers at Argonne National Laboratory, one of the nation's oldest and largest science research centers and home to some of the most high-tech facilities in the world.

Northwestern Medicine

Northwestern engineers work closely with professors and physicians at Northwestern's Feinberg School of Medicine, Northwestern Memorial Hospital, and the Northwestern University Clinical and Translational Sciences Institute to advance medical progress and inspire new partnerships.

Art Institute of Chicago

The Northwestern University/Art Institute Center for Scientific Studies in the Arts allows faculty and students to help conserve some of our greatest masterpieces and to understand the methods used by great artists.

Rehabilitation Institute of Chicago

Northwestern Engineering collaborates frequently with the Rehabilitation Institute of Chicago, the nation's top-ranked rehabilitation center, to design better rehabilitation robotics and artificial limbs.

That's why our faculty is made up of world-class scholars and breakthrough researchers, all focused on a dual mission of cutting-edge research and inspiring instruction.

Research is a critical part of our undergraduate curriculum, and you'll encounter it firsthand in the full spectrum of engineering fields. You'll have access to a host of research centers and programs where award-winning faculty work across disciplines to advance thinking and pass their expertise on to students.

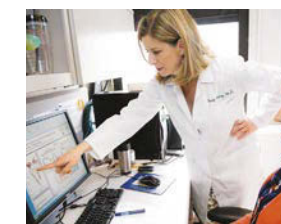
NOTABLE FACULTY RESEARCHERS



MARK HERSAM

Professor of Materials Science and Engineering, MacArthur Fellow, and renowned nanomaterials researcher

Professor Mark Hersam spends his time researching across scientific boundaries to create new materials to use in technology, biotechnology, energy, and flexible electronics for personalized health monitoring. The Hersam Research Group also applies the fundamental paradigm of materials science and engineering to create hard and soft materials at the nanometer-length scale. This highly interdisciplinary research ranges from fundamental studies to applied technology development.



WENDY MURRAY

Associate Professor of Biomedical Engineering and Physical Medicine and Rehabilitation

Associate Professor Wendy Murray analyzes the biomechanics of baseball pitching through computer simulation to help athletes prevent elbow injuries. Because current technology is not sophisticated enough to estimate an individual player's injury risk, Murray's new approach may one day give high-risk players more personalized muscle feedback and better odds to avoid injury.



LARRY BIRNBAUM

Professor of Electrical Engineering and Computer Science

Professor Larry Birnbaum plays a major role in helping his undergraduate students collaborate with their journalism school counterparts on an artificial intelligence platform that writes news articles from statistical data. The interdisciplinary work, which led to the startup Narrative Science, emerged from Northwestern's Knight Laboratory, where teams of technologists, journalists, designers, and educators work together to advance journalism into new spaces through engineering exploration and experimentation.

IT TAKES WHOLE-BRAIN THINKING. AND IT TAKES AWARD-WINNING FACULTY.

With a notable 9:1 student-faculty ratio, our engineering classes are taught by 180 full-time professors and faculty who work one-on-one with undergraduates and play active roles in their research.



**NNEOMA
ORADIEGWU**

*Computer
Engineering*

Oradiegwu focuses on building better computers by working at the center of electronics and programming. As an intern at Facebook's Bay Area headquarters, she participated in the Facebook University for Engineering program, where she worked in a small team on Android mobile development.



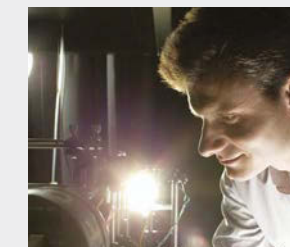
**BECAUSE
NORTHWESTERN
UNDERGRADUATES
ARE SOME OF
THE BEST IN THE
WORLD, I'VE FOUND
UNDERGRADUATE
RESEARCH TO BE AN
ALL-AROUND WIN.**

**IT GIVES STUDENTS A
CHALLENGE BEYOND
COURSEWORK AND
AN OPPORTUNITY TO
EXPERIENCE RESEARCH,
AND I GET TO TRY OUT
'CRAZIER' IDEAS THAT
MIGHT NOT OTHERWISE
BE POSSIBLE.**

*Peter Dinda, Professor of Electrical
Engineering and Computer Science*



FORGING NEW PARTNERSHIPS



VADIM BACKMAN

*Walter Dill Scott
Professor
of Biomedical
Engineering*

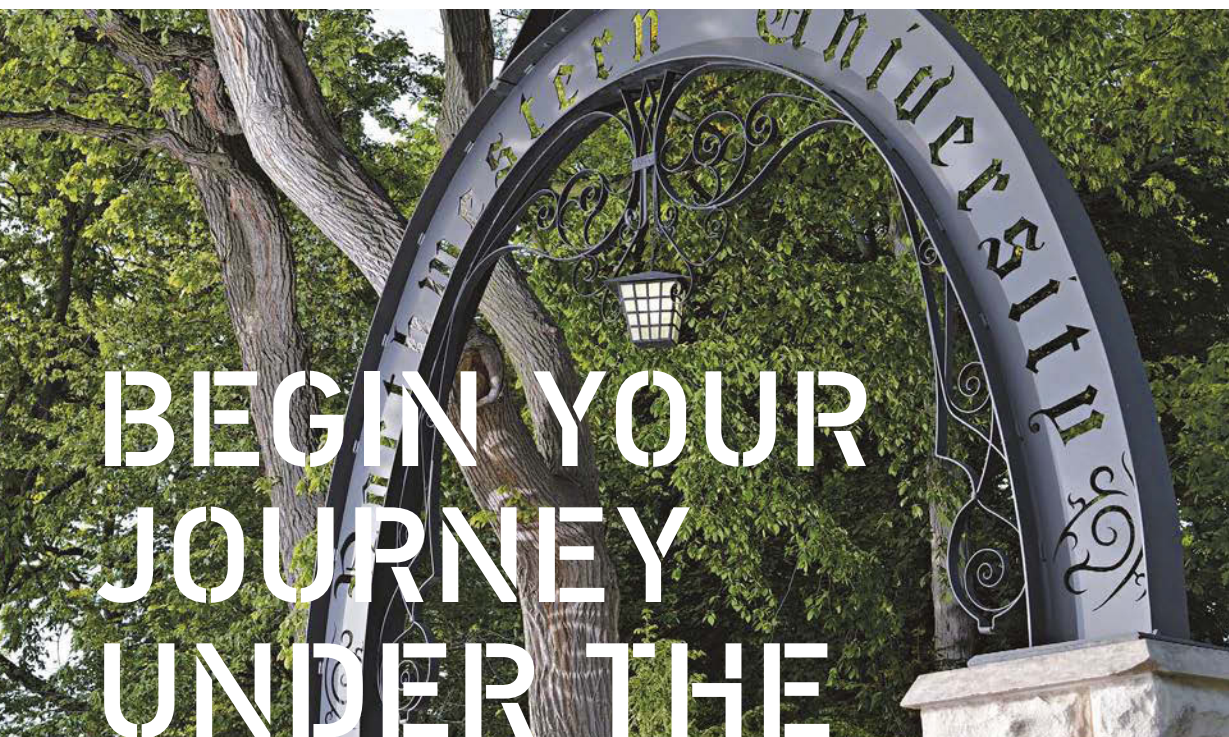
Professor Vadim Backman has distinguished himself both as a cross-disciplinary researcher and collaborator and as a significant mentor to his students. His team's work has resulted in innovative optical technologies for early-stage cancer detection, and his biomedical engineering students have ranked his classes among the school's most useful, resulting in published student research papers in *Optics Letters*, one of the discipline's more prestigious academic journals.



KAREN SMILOWITZ

*Professor of Industrial
Engineering and
Management
Sciences*

Professor Karen Smilowitz conducts research in humanitarian logistics, including the coordination of people, organizations, and materials for those most in need. Working with organizations like the American Red Cross to develop innovative modeling and solution techniques for these complex systems, Smilowitz oversees several projects focusing on operational improvement in community-based healthcare to improve individual life outcomes by addressing welfare, equity, and administrative efficiency.



BEGIN YOUR JOURNEY UNDER THE ARCH.

From the moment you walk under the Weber Arch, the official entrance to the University, you'll feel our distinct and vibrant campus culture. Situated on the shores of Lake Michigan and just a short train ride from Chicago, our picturesque campus boasts time-honored historic buildings alongside cutting-edge facilities. Study and relax in beautiful gardens and open spaces, and stay fit with an impressive gym and easy access to water sports.

IT TAKES NORTHWESTERN ENGINEERING.

Numerous groups allow engineering students to get involved in the Northwestern community and beyond. Here are just a few of the groups where our students regularly give their time:

- *Baja SAE*
- *Design for America*
- *Engineers for a Sustainable World*
- *Engineering World Health*
- *Formula SAE*
- *Global Water Brigades*
- *National Society of Black Engineers*
- *Northwestern University Space Technology and Rocketry Society*
- *NU Robotics Club*
- *Society of Hispanic Professional Engineers*
- *Society of Women Engineers*
- *Solar Car Team*



STUDENT ORGANIZATIONS

Our students benefit from a wide range of engaging activities. We foster an unwavering appreciation for diversity and encourage students to explore the more than 500 organizations and opportunities on campus. These pursuits take students beyond the classroom, promoting professionalism, networking, community service, tutoring, mentorship, and fun!



BRIGHT MINDS BIG CITY.

Downtown Chicago, home to companies like Boeing, United Airlines, and Motorola, where students intern during school and begin their careers after graduation.

45 MINUTES

Catch a concert at **Millennium Park**.

45 MINUTES

Go to the **Field Museum** to explore natural history and learn how Northwestern researchers are teaming up with resident experts to study the world's diminishing coral reefs.

50 MINUTES

Visit the **Art Institute of Chicago**, where engineering professors use high-tech imaging to understand artistic methods and create new conservation techniques.

45 MINUTES

Argonne National Laboratory, our primary research partner in the areas of sustainability and energy.

60 MINUTES

TIMES ARE APPROXIMATE.

Grab a hot dog and enjoy a Cubs game at **Wrigley Field**.

30 MINUTES

Oak Street Beach, always one of the best places to spend a Saturday in the Windy City.

40 MINUTES

Find the latest trends and gadgets on Michigan Avenue's **Magnificent Mile**—one of the world's top retail districts.

40 MINUTES

The Second City is more than Chicago's nickname. It's also a famous comedy club where stars like Bill Murray, Tina Fey, and Northwestern alum Stephen Colbert got their start.

35 MINUTES

Chicago is a great place to let your curiosity run wild. Go catch a Cubs game, hunt for the perfect deep-dish, or seek out world-class culture. At Northwestern Engineering, one of the largest, most economically vibrant cities in the country is less than 10 miles away.

GETTING TO CHICAGO.

- Hop on the "L" train for 30 minutes.
- Take the intercampus shuttle for 35 minutes.
- Drive along Lake Michigan.
- Bike the trails along Lake Shore Drive.

THE FORESIGHT TO ENVISION WHAT'S NEXT. THE COMMITMENT TO MAKE IT HAPPEN.

Northwestern Engineering students create a better world by giving back to communities where help is needed most. Through an investment in service learning, our students make a global impact with every inspiring cause they work on. Notable student projects

include everything from low-cost digital x-ray systems for developing countries to ideas hatched in the inventive Design for America studio, which tackles big societal problems like climate change, literacy, and food waste to generate powerful social change.



STUDENTS IN THIS PROGRAM GET A TRUE SENSE OF DESIGN. THEY TAKE THEIR ENGINEERING SKILLS AND SEEK SOLUTIONS THAT COULD ACTUALLY WORK IN RESOURCE-LIMITED SETTINGS.

Matthew Glucksberg, Professor of Biomedical Engineering and head of the Center for Innovation in Global Health Technologies



DEVELOPING MEDICAL DEVICES FOR DEVELOPING COUNTRIES.

Every year, Northwestern Engineering students work to improve underserved communities around the world. When 16 students traveled to Cape Town in 2015 as part of the Global Health Technologies study abroad program, they tackled some of the region's most pressing issues, creating devices and processes to improve the delivery of essential

healthcare. At the end of the quarter, the group had created four significant prototypes: a simple carbon dioxide detector to help paramedics intubate patients, a tablet app to help nurses diagnose diseases and prescribe treatments, a new type of mask for protecting against tuberculosis, and an app for a clinic kiosk to help patients book appointments.



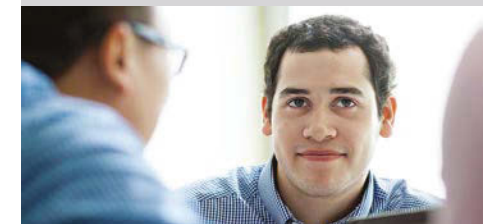
Students involved with Engineers for a Sustainable World work to build a more environmentally friendly world both at home and around the globe. In recent years, they have developed campaigns to encourage students to forgo bottled water on campus, and have traveled abroad to find clean water solutions in Chile and design new processes for hulling rice in Panama.



JESSE VEGA-PERKINS

Environmental Engineering

Vega-Perkins applies her research in environmental sustainability and her passion for public health issues toward a future in which underserved communities around the world can enjoy clean drinking water. As president of the Northwestern chapter of Engineers Without Borders, she helped lead the multiyear development of a new water distribution pipeline in a small town in Kenya. She hopes her work brings attention to the human side of sustainability.



NATHANIEL EZOLINO

Industrial Engineering

Through a partnership with the National Society of Black Engineers, Ezolino helps make a positive impact through community outreach and service learning. Hosting interactive experiments for local elementary schools and leading Museum Takeovers at the Museum of Science and Industry in Chicago, Ezolino sparks interest in engineering for children who might otherwise miss the opportunity to gain hands-on experience in the field. And by combining humanitarianism and a passion for engineering, he hopes to show students that creating your own path is not only possible, it can also be a force for good.

ACCOMPLISHED ALUMNI

When you graduate from Northwestern Engineering, you become part of our global alumni network, a highly diverse and successful group of professionals who exemplify the concept of whole-brain engineering.



Lourdes Solis ('06)
Vice president, corporate coverage and solutions, Deutsche Bank Securities



Mert Iseri ('11)
Cofounder, SwipeSense



Ginni Rometty ('79)
Chairman, president, and CEO, IBM



Alicia Boler-Davis ('91)
Executive vice president of global manufacturing, General Motors



Anoop Jain ('09)
Founding director, Sanitation and Health Rights in India



Milton Morris ('92, Kellogg '04)
CEO, NeuSpera



Yie-Hsin Hung ('84)
CEO, New York Life Investments



Joe Girardi ('86)
Manager, New York Yankees



Matt Levatich (MEM '94, Kellogg '94)
President and CEO, Harley-Davidson



Chelsea Stoner ('96)
General partner, Battery Ventures



Cindy Kent ('91)
President and general manager, 3M Drug Delivery Systems Division



Michael Cruz ('02)
Vice president of engineering, Trunk Club



Mark Fischer ('13)
Mechanical engineer, X: The Moonshot Factory



David Nichols ('91)
Senior principal, Americas Inorganic Growth Leader, EY



Bob Feldmann ('76)
Vice president and general manager of the 777X program, Boeing



Gwynne Shotwell ('86, MS '88)
President and COO, SpaceX



Gary Kremen ('85)
Founder, Match.com and Clean Power Finance



Carolyn Duran (PhD '98)
Conflict-free minerals program manager and supply chain director, Intel



Tony Vasquez ('13)
Associate, Booth Hansen Architects



Dan Lipinski ('88)
US Representative, Illinois's Third Congressional District

DISCOVER YOUR OWN NORTHWESTERN DIRECTION.



It starts with a notion and results in a breakthrough. But it's never a simple path. What starts in one discipline will always be influenced by many ways of thinking and a variety of academic approaches. Here are a few areas where your own journey might begin.



APPLIED MATHEMATICS

Learn to apply mathematical ideas, modeling, and techniques to problems that arise in engineering and science.



BIOMEDICAL ENGINEERING

Integrate biology and engineering by applying engineering techniques to the analysis of biological systems.



CHEMICAL ENGINEERING

Solve practical problems that involve chemistry and biochemistry as well as the composition or structure of materials.



CIVIL ENGINEERING

Learn to plan, design, build, and operate the public infrastructure, including roads, airports, bridges, tunnels, water supplies, and power facilities.



COMPUTER ENGINEERING

Explore the design and engineering of computer hardware and software through courses that synthesize computer engineering, computer science, and electrical engineering.



COMPUTER SCIENCE

Take on the challenges posed by the world of ubiquitous, interactive, and networked multimedia computing.



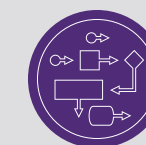
ELECTRICAL ENGINEERING

Investigate the development and application of electronic and optical technologies for generating, communicating, and processing information.



ENVIRONMENTAL ENGINEERING

Develop and apply scientific and technological knowledge to eliminate or reduce environmental problems.



INDUSTRIAL ENGINEERING

Learn about the design, analysis, implementation, operation, and improvement of the complex systems that provide society's vital goods and services.



INTEGRATED ENGINEERING

Create your own self-guided major by learning across fields and combining engineering with art, economics, or other subjects of interest.



MANUFACTURING AND DESIGN ENGINEERING

Learn to integrate design and manufacturing processes into an effective system, including all aspects of product realization from design to manufacturing technologies and operations.



MATERIALS SCIENCE AND ENGINEERING

Explore the development of high-technology materials, with an emphasis on the scientific reasons materials behave the way they do.



MECHANICAL ENGINEERING

Study a rapidly diversifying field that includes areas such as robotics, biological molecular machines, microelectromechanical systems, nanotechnology, product design, and computer-aided manufacturing.

THINK YOU'RE A WHOLE- BRAIN ENGINEER? TAKE THE NEXT STEP.

SegalDesignInstitute
NORTHWESTERN UNIVERSITY

DF DESIGN / AMEE
★ A NORTHWESTERN UNIVERSITY

SCHEDULE A VISIT

Discover the tree-lined streets of Evanston and meet current students to get a feel for life at Northwestern Engineering. Campus visits give you a chance to attend a student-led campus tour, sit in on a class, attend an information session, and truly discover what our campus has to offer.

Schedule your campus visit at
admissions.northwestern.edu/visit/plan-your-visit

Please email, call, or visit our website to learn more about the McCormick School of Engineering and Applied Science at Northwestern University.

mccormick.northwestern.edu

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facebook.com/NorthwesternEngineering

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ueoffice@northwestern.edu

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Northwestern University
Office of Undergraduate Engineering
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Evanston, Illinois 60208-3102

**IT TAKES WHOLE-
BRAIN THINKING.**
IT TAKES WHOLE-
BRAIN ENGINEERING.

"At Northwestern, no single thing
defines me. I'm a whole-brain engineer."

— DREW LEVORSEN
