Overcoming the greatest challenges of our time requires more than knowledge. It requires creativity, daring, the ability to bring people together, and, yes, the willingness to fail. The engineers of tomorrow must be more than experts in their fields; they must be great leaders. With this in mind, McCormick is dedicated to providing academic, career-oriented, and extracurricular opportunities to empower the leaders of this generation.

Preparing for the future

For Brian Chester (chemical engineering ’13), opportunity means packing up his textbooks and breaking out his button-downs. This spring, instead of attending his regular classes, Chester headed to Midland, Michigan, to help develop new monitoring systems for the Dow Chemical Company. He is taking part in the Walter P. Murphy Cooperative Engineering Education Program (co-op), which allows students to alternate periods of academic study with full-time periods of paid work experience related to their academic and professional goals.

By the time he graduates, Chester plans to complete at least three stints at Dow in areas such as research and development, manufacturing, and long-term development. “I’m exploring and seeing what’s out there,” Chester says. “And I’m learning a ton about what chemical engineers actually do.”

The Office of Career Development worked with more than 800 McCormick students last year through co-op, internships, and other programs, says Helen Oloroso, assistant dean and director of the Office of Career Development, which provides career advice and integrated learning opportunities. That’s up from just 300 a decade ago.

“Students need more than a good transcript to be competitive in today’s workforce,” Oloroso says. “Potential employers want industry experience—someone who has both the technical knowledge and experience applying it. We prepare our students for that reality.”

Experiences in the classroom and on the job put students on track for success, but true leadership requires life experience, curiosity, and the willingness to move outside one’s comfort zone. McCormick’s Office of Personal Development promotes well-roundedness by encouraging students to explore their strengths, engage in new experiences, and take responsibility for their learning.

The only formally established office of its kind at an engineering school in the United States, the Office of Personal Development hosts its own guest speakers, workshops, and off-campus outings while also promoting events offered throughout the University. “Excellent, transformative experiences take place on this campus all the time,” says Joe Holtgreive, assistant dean and director of the office. “We want to make sure our students take advantage of these opportunities.”
Innovation by design
Whether the result is a space shuttle or a shampoo bottle, design is a vital part of every engineering feat—and a vital part of a McCormick education. At the Segal Design Institute, students learn how good design can shape the environment to satisfy both individual and societal needs. The institute, founded in 2007 with support from Crate & Barrel founders Gordon and Carole Browe Segal, offers courses, projects, certificates, and degrees for undergraduate and graduate students.

The Segal Design Institute is also home to Engineering Design and Communication, a required freshman course sequence in which student teams work with real clients to design products to solve a problem. For most students, it is their initial attempt at product development, and the process can seem overwhelming.

“At first, it felt like we were in over our heads,” said Vinithra Rajagopalan (biomedical engineering ’15), whose team designed a computerized treadmill to help wheelchair athletes train for races (see related story on page 7). “But now that we’re nearing the end, it’s just exciting. It feels like we’re actually making a difference.”

Some designs are so innovative that they can be expanded into businesses. For students interested in creating their own start-up companies to market their products, the Farley Center for Entrepreneurship and Innovation provides an invaluable resource. Founded in 2007 with a grant from the James N. and Nancy J. Farley Foundation, the center offers a series of courses and programs that give undergraduate and graduate students the skills they need to realize their own business plans. Among Farley’s offerings are the popular NUvention courses, which take students from across Northwestern through the process of developing products and launching business plans for medical, online, and energy applications.

The Farley experience was nothing short of life-changing for Nikhil Sethi (electrical engineering ’10). He and fellow McCormick student Garrett Ulom founded their start-up company, Adaptly, in a NUvention course that exposed students to the product and business development cycle of a software company. Adaptly provides a platform for businesses to buy ads on multiple social networks simultaneously. It now employs dozens of people at its Manhattan location and recently opened an office in London. The company projected 2011 revenues of more than $10 million, and Sethi was named one of Forbes magazine’s “All-Star Student Entrepreneurs.”

Creating leaders
From its new home at McCormick, Northwestern’s Center for Leadership provides students from across the University with skills to become leaders in their chosen fields. Founded in 1990 as the Undergraduate Leadership Program, the center has provided a popular undergraduate certificate program in leadership to more than 2,500 students over two decades. Recently the center began offering a competitive Leadership Fellowship for advanced PhD students and high-potential Northwestern staff members.

Physically housed at 1813 Hinman Avenue, the center found its academic home at McCormick in 2010. “McCormick students will be called upon to be leaders in their careers, and so it’s important for the school to introduce them to the concepts of effective leadership throughout their education,” says Adam Goodman, the center’s director.

Together with McCormick’s Office of Personal Development, the center enables McCormick students to reach their greatest potential and prepares them to become the leaders of tomorrow, says Dean Julio M. Ottino: “With resources like these, McCormick educates whole-brained engineers who thrive at the great intersection. We are only as good as the people we produce. Our value resides in the graduates of our school.”