For many McCormick incoming freshmen, “team” is a dirty word—and for good reason. Says Stephen Lillington, a freshman studying chemical engineering, “In high school, teamwork inevitably meant that I would end up pulling more weight than my teammates or I’d have to re-do their work. It was really frustrating.”

Like it or not, even the best engineers in the world constantly find themselves fighting uphill battles if they don’t know how to collaborate. People skills matter in school, on the job, with family and friends, and virtually everywhere else one’s entire life.

Whether they have a take-charge attitude or bristle at the thought of speaking in a group, McCormick freshmen get a new take on teamwork from a program developed by Northwestern’s Center for Leadership. Integrated into the two-quarter foundational course, Design Thinking and Communication (DTC), this new program requires students to formally analyze their individual and group strengths and weaknesses in a series of assessment exercises.

“We are giving them tools and self-awareness. They leave much more aware of what they don’t know.”

ADAM GOODMAN

A 360° VIEW OF LEADERSHIP

Founded nearly 25 years ago, the Center for Leadership began by offering a popular undergraduate certificate program in leadership and subsequently expanded its offerings to graduate students as well. Since the center became part of McCormick in 2010, it has emerged as a trailblazer in the integration of leadership and engineering.

Although housed within McCormick, the center offers services broadly across Northwestern. Each year, approximately 300 students complete the center’s “360° Assessment,” an evaluation that collects insights from professors, classmates, and others to help determine a student’s leadership strengths and weaknesses. In a subsequent coaching session, participants meet with program leaders to discuss the findings and explore pathways for growth. Grounded in principles of “authentic leadership,” programs like these teach students to develop their individual leadership style based on their own talents, rather than emulate a maverick CEO who’s perceived as today’s great leader.

EXTENDING THE CONCEPT TO TEAMS

The collaborative program between DTC and the center, now in its fourth year, encourages students not only to look to their individual strengths for personal growth, but also to align them with the goals of the team. Early in the quarter, teams develop charters that lay out the mission, goals, and ground rules for their interactions. At midterms, as a group, they conduct an online survey, assessing their own work and that of their teammates. Through a frank, give-and-take team discussion of the assessments, students determine an area they want to work on in the second half of the course.
The Center for Leadership has developed the “360° Assessment,” an online evaluation tool that collects insights from professors, classmates, and others to help determine a student’s leadership strengths and weaknesses.

Students can see how others rated them on their seven leadership assets (the closer to the outside of the circle, the higher the rating) and how their rating compares to the average rating.

Northwestern is one of the first universities to customize a tool like this for its students. The software, developed by the Center for Leadership and McCormick’s Information Technology team, has already been licensed by three universities.

**What does it take to be a leader?**

- Navigating and leading change
- Overcoming adversity and failure
- Asking powerful questions
- Inspiring others through narrative
- Thriving in hierarchical settings
- Mobilizing people and harnessing difference
- Thriving in collaborative settings

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**Student Distribution**

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The brutal honesty that such conversations require could make for a harrowing experience. After all, who wants to be told they monopolize conversations or dominate decision making? The results, however, are rarely devastating. “Students aren’t as fearful of this conversation as you might think they’d be,” Goodman says. “They understand they really are here to learn, and this is a safe environment in which to do it.”

Student Elizabeth McTighe approached her group project with some skepticism, but found creating a charter especially helpful. “It was nice to know that if you broke the rules, no one was going to get mad at you, but you were going to be held accountable,” says McTighe, whose group created a special timer to help improve dental hygiene at a residential home for people with developmental disabilities. “It gave us a non-confrontational way to talk to each other.” To curb tardiness, her group agreed that anyone who showed up late to a meeting had to bring food for the group next time; the rule was broken only once.

The Center for Leadership program can also give faltering students a second chance, according to Bruce Ankenmann, Charles Deering McCormick Professor of Teaching Excellence in Industrial Engineering and Management Sciences and co-director of the DTC program. “For me, that is the greatest outcome,” he says. “A student can step back at the mid-term evaluation and say, ‘You’re right, I do tend to interrupt people. I need to work on that,’ and they have time to improve.”

CONTINUOUSLY IMPROVING THE PROCESSES

The DTC assessments are conducted on a proprietary online portal, which collects students’ data and tracks their progress; instructors can also view the data. The system, developed by McCormick’s Information Technology team and based on research conducted at the Center for Leadership, is attracting widespread attention inside and outside the University. Northwestern’s Innovation and New Ventures Office is commercializing the software, and three universities—Georgia Tech, Texas Tech, and Claremont McKenna—have already licensed it. That number is expected to double in the next year. Other Northwestern disciplines ranging from entrepreneurship to journalism have begun using the software as well.

In the meantime, Goodman and his team continue to improve the process. Data from previous courses have shown that the ratings that teams and individual students give themselves on their mid-term assessments accurately predict how well the team will fare in its final project. “We can actually tell when a team is likely to fail,” Goodman says, “and we can use this data to help faculty intervene and guide them while there is still time for improvement.” Later iterations of the portal will feature a dashboard with an indicator that signals yellow and red when a team is at risk for failure. The next step is a module that pulls together data from each student’s teamwork assessments, as well as other leadership assessments from the portal, so students can see the trajectory of their leadership and teamwork development over time and also how it compares to the entire population of students.

Gaining knowledge about oneself is the first step in improvement, but it’s not everything. “We are a launching pad, not a factory,” Goodman says, referring to the system’s role in student development. “We are giving them tools and self-awareness. They leave much more aware of what they don’t know.”

SARAH OSTMAN