

Bernard M. Gordon–MIT Engineering Leadership Program

Launched in 2008 through a \$20 million gift from the Bernard M. Gordon Foundation (the largest gift made to MIT's School of Engineering for curriculum development), the Bernard M. Gordon–MIT Engineering Leadership Program (ELP) was established to educate and prepare the future potential leaders of engineering innovation, invention, and implementation efforts.

Designed for MIT engineering undergraduate students, the ELP provides a major, national model to develop next-generation technical leaders who are equipped to understand and address significant engineering problems in real-world situations.

In the Bernard M. Gordon–MIT Engineering Leadership Program, students learn by doing. The program offers MIT undergraduates two unique leadership tracks: the broad Engineering Leadership Practice Opportunities Program (ELPOP) track and the more focused Gordon Engineering Leaders (GEL) track. Both tracks begin in the student's sophomore year with the Undergraduate Practice Opportunities Program (UPOP). Upon successfully completing UPOP, students can elect to participate in the ELPOP or apply for the more intensive GEL track.

The end of AY2009 marked the successful completion of the program's inaugural year.

Building Engineering Leaders

Led by codirectors professors Edward Crawley and Joel Schindall, ELP faculty and staff in AY2009 conceived, planned, and executed numerous activities to help develop in MIT students key capabilities of engineering leaders.

Program leadership hired subject-matter experts in engineering leadership education, project-based learning, and communications and outreach; these professionals worked together and with significant input from leadership experts at MIT, industry, academia, and the military to define program policies and procedures and build critical alliances both inside and outside the Institute. Aggressive program outreach included creating a website (<http://web.mit.edu/gordonelp/>) and producing informational and promotional collateral for print and online distribution.

The program successfully recruited and admitted the Gordon Engineering Leader Class of 2011. ELP faculty and staff designed and ran a new subject, ESD.951 Engineering Innovation and Design, planned and executed two terms of engineering leadership labs (ELLS), and developed strong working relationships with the Sloan School of Management and with the System Design and Management program.

ELLS offer hands-on engineering leadership learning opportunities for GEL students. In ELLS—which are planned, organized, and led by GEL students with Gordon staff oversight, coaching, and assessment—students participate in guided reflection on their success and discover opportunities for improvement. Guided learning activities in the

ELs include role-play, simulations, design-implement activities, and analyses of case studies, films, and books related to engineering leadership.

The program involved key stakeholders from leading engineering industry companies and MIT faculty to form advisory boards that contributed to program development and helped to connect program students to internships and industry mentors. Additionally, the program held professional development activities for program staff and other MIT faculty/staff, convened meetings of project-based instructors, and funded departments for leadership-oriented projects.

In terms of resource development, the program is actively seeking matching funds for the Gordon contribution. A kick-off breakfast on May 20 featured remarks by MIT president Susan Hockfield, School of Engineering dean Subra Suresh, and Raytheon CEO Bill Swanson.

Edward Crawley

Director

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