Background

The Gordon Engineering Leadership Program was launched in 2007 with a $20 million gift from the Gordon Foundation, established by Bernard and Sophia Gordon, to prepare the next generation of engineering leaders. A 1986 National Medal of Technology recipient, Mr. Gordon has led an extraordinarily accomplished technical career. His gift represents the single largest endowment in the history of Northeastern University.

Description

The Gordon Engineering Leadership Program is an intensive, one-year graduate program designed to build a future corps of engineering leadership professionals. The program provides an excellent opportunity for aspiring leaders to accelerate their careers through advanced technical and leadership training.

Most students pursue the Gordon Engineering Leadership Program as part of a Master of Science degree in the engineering discipline of their choice. Students who already hold a graduate degree in engineering can complete the program to earn the Graduate Certificate in Engineering Leadership.

The program accelerates leadership development in an engineering context through a concentrated curriculum of coursework, mentoring, and a market-worthy Challenge Project. Graduates of the program, known as “Gordon Fellows,” stand out from their peers in their ability to invent, innovate, and implement engineering projects from concept to market success. These leaders demonstrate an exceptional ability to lead teams by providing purpose, direction, and motivation to influence others to achieve organizational goals.

Participants are typically employees of their sponsoring organization and collaboratively develop a Challenge Project that is of strategic importance to the organization. Tuition and fees are usually paid by the sponsoring organization on behalf of the participant, who also receives a salary or graduate stipend.

Major Program Elements

Gordon Program Courses

- Engineering Leadership – Focuses on leadership qualities, product engineering, market assessment, and engineering excellence (4 Semester Hours)
- Scientific Foundations of Engineering – Focuses on understanding basic scientific limitations to use in evaluation of new technologies (4 Semester Hours)

Challenge Project with Corporate or Government Sponsor

- Thesis-equivalent project and presentation (8 Semester Hours)
- A project that is of key strategic importance to the Sponsoring Organization

Gordon Program Mentoring

- Program Mentors who have demonstrated track records of leading major engineering projects
- Faculty Mentors who can provide guidance and direction in fundamental research areas

Technical Graduate Courses

- For most disciplines, students are required to complete four technical electives in addition to the Gordon Program requirements to receive a Master’s Degree and a Graduate Certificate in Engineering Leadership

Challenge Project Development

The Challenge Project is the most important element of the Gordon Engineering Leadership Program. Upon completion of the Challenge Project, Gordon Fellow candidates will have demonstrated technical depth in a chosen engineering discipline; learned and mastered skills in initiating, executing, and delivering on a plan to solve a complex problem; and honed their leadership acumen by completing a project on time, within budget, and to spec.

A Challenge Project must be important to the sponsoring company or partner, have a measurable impact, be sufficiently difficult to stretch the candidate, and must satisfy the University requirement for Masters-level work. It is not a thesis, but equivalent in effort to confer academic credit for a completed practical achievement.

The vital required elements of a Challenge Project include:

1. Market Value – The project must be able to identify an opportunity with quantifiable value to the sponsoring organization in terms of meeting or satisfying a market and customer need. Each project may have unique descriptions of the market or customer, including internal customers, but they must be identified and understood.

2. Technology/Scientific/Engineering depth – The project must challenge the candidate in the engineering domain, where novel, innovative, or unique knowledge and skills are learned and exercised. Running a team where others do the technical work is not sufficient.

3. Leadership – The project must represent something that is a true challenge, with clear stretch, importance, and opportunity to establish and refine leadership skills. Something that would have been done anyway, in the course of the everyday job, is not sufficient. The project should demonstrate the ability to successfully initiate a project, sell an idea, create and run a team, report progress to executives, and summarize results.

The Challenge Project requires several key deliverables. The 20-page proposal at the beginning outlines the problem, an approach, and a schedule for accomplishment. The 40-page report at the conclusion documents results, lessons learned, and a summary of the project’s importance to the company and the individual candidate. Throughout the project, the candidate draws support from a team of mentors responsible for nurturing the candidate and project: the Industry Sponsor/Advocate, the Gordon Mentor, and the Academic Faculty Advisor. Both the proposal and the report may contain proprietary information which the candidate and mentors must protect, yet they must still be able to describe the fundamental details of the project.

In summary, the Gordon Fellow must propose a project which has real meaning to the sponsoring company (market) and a technical approach with a 12-month schedule. At the project’s conclusion, the Gordon Fellow must describe the design (technology) difficulties overcome and validated results that satisfy the original intent.

Gordon Fellow Sponsor Organizations

- Analogic Corporation
- Bose Corporation
- Raytheon IDS
- Raytheon NCS
- Lockheed Martin
- Lincoln Laboratory
- Army Natick Labs
- Draper Laboratory

- Physical Sciences, Inc.
- Textron Defense Systems
- Analog Devices
- CipherTech Solutions, Inc.
- US Army Night Vision and Electronic Sensors Directorate
- GE Healthcare
- US Air Force

- Nevada Automotive Test Center
- IMI Intelligent Medical Implants
- A.W. Chesterton
- Fikst
- Metis Medical Group
- EMC Corporation
- Protonex
- Gordon-CenSSIS
- VOTERS

For more information, visit http://www.neu.edu/gordonleadership or email gordonleadership@neu.edu.