BACKGROUND AND INTRODUCTION

Origin and Description of the Bernard M. Gordon-MIT Engineering Leadership (GEL) Program:

The GEL Program was founded in the MIT School of Engineering (SoE) in 2007 with a $20M initial donation from Bernard Gordon. It is a co-curricular program to supplement MIT’s undergraduate engineering education by developing the character, and the product design and leadership skills, of SoE juniors and seniors, thus enhancing their ability to function as engineering leaders, and contribute to society by improving engineering leadership in the nation. GEL currently provides leadership instruction to about 130 juniors (and a few seniors) in the one-year program, and another 35 seniors in the second year program.

The purpose of the GEL program is to use immersive and team exercises, class material, individual assessment and feedback, and industry mentors/internships, to experientially develop the capabilities, skills, and attitudes of engineering leadership in SoE undergraduate (and graduate) students. The goal is to develop engineers who will become leaders in their field and contribute effectively to society.

The GEL program also includes two related organizations. The first is the Undergraduate Practice Opportunities Program (UPOP) which was founded in 2001, also in SoE, to help MIT sophomores develop their communication, teamwork and decision making skills and allow them to practice these skills through a summer internship in industry, and became part of the GEL program in 2007. The UPOP program reaches about 500 sophomores each year. The second is the Communication Lab (Comm Lab), founded in 2012, which works with several of the SoE departments to help graduate students develop their writing and presentation skills through mentoring from Communication Fellows. The Fellows are comprised of graduate students and some post-docs and staff who are selected and trained by the program staff and then provide one-on-one peer tutoring to graduate students and some undergraduates. The Communication Lab has a separate central staff, who in turn work with a Communication Administrator in each of five departments. As of 2017 there are 52 Fellows, supported by their individual departments, and they interacted with over 800 students.

KEY EXERPTS FROM THE “PROPOSAL FOR THE ESTABLISHMENT OF THE BERNARD M. GORDON–MIT ENGINEERING LEADERSHIP (GEL) PROGRAM:

Description of an engineer:

“I propose to define a REAL, that is, professional, ENGINEER as one who has attained and continuously enhances technical, communications, and human relations knowledge, skills, and attitudes, and who contributes effectively to society by theorizing, conceiving, developing, and producing reliable structures and machines of practical and economic value.” [Bernard M.
Purpose of the program:
“The proposed program, housed in the MIT School of Engineering, will support an ongoing multi-year set of leadership-oriented hands-on engineering activities, designed both to develop outstanding MIT students as potential future leaders in the world of engineering practice and to transform engineering leadership in the nation.”

Definition of the Industry Co-Director:
“The Gordon Foundation gift will also support a new position, the Industry Co-Director of the Gordon-MIT Program, who will be recruited from among engineering leaders in a product development* industry and appointed by the Dean of Engineering. Working with the Faculty Co-Director (or Co-Directors), who will also be appointed by the Dean of Engineering, the Industry Co-Director will guide the overall program at MIT.”

POSITION DESCRIPTION

General:

The key qualification is for the applicant to have significant and exemplary industry experience and achievement in product development,* product management, and leadership. It is expected that he/she will also have the academic background to interact with the engineering departments, the interpersonal skills to work effectively and caringly with staff and students, and the ability to interact and advocate for the program with SoE faculty and administration. In addition to directing, representing, expanding, and managing the GEL, UPOP and Comm Lab programs, the Industry Co-Director may also perform academic and teaching duties in the department aligned with his or her academic expertise.

A likely candidate would be someone with significant (and successful) industry engineering leadership experience in product design and development,* who also has a strong academic background, and who is at a point in his/her career where he/she is available, motivated, and passionate about the opportunity to develop the leadership ability of our MIT engineering undergraduate and graduate students.

Duties and Responsibilities with respect to GEL, UPOP and Comm Lab:

Reporting to the Dean of Engineering or his delegate, and in conjunction with the Faculty Co-Director, the Industry Co-Director’s duties and responsibilities include:

1. Ensure the smooth and effective operation, interface, and expansion of the GEL program, the

* In this document, “product development” is taken to include the innovative conception, design and implementation of new products, processes, materials, molecules, software, and systems.
GEL Professional Education subject offerings, and the two related programs overseen by the Co-Director: Undergraduate Practice Opportunities Program (UPOP) and the Communication Lab (Comm Lab).

2. Ensure that the GEL program remains true to the purpose of developing future engineering leaders, as described in the program proposal (which is incorporated into the funding agreement), the “Capabilities of an Engineering Leader” document developed in the first year of the program (available on the GEL website at gelp.mit.edu), and the program’s mission, vision, and values.

3. Responsible as a senior lecturer (or professor of the practice “PoP” if qualified) for guiding and participating in the instructional activities of the GEL program, including developing and leading portions of the instructional material, participating actively in other GEL classes, and sharing his/her industry experience with students and program staff.

4. Responsible, together with the GEL executive director and program staff, for proactively recruiting students into the program and ensuring that they have a positive and valuable experience.

5. Responsible, together with the GEL faculty co-director, executive director and program staff, for maintaining positive relations with GEL alumni, including alumni reunions, having alumni participate in program activities, working with alumni to sponsor GEL student internships and job opportunities, and encouraging alumni donations to the GEL program.

6. Responsible, together with the GEL faculty co-director, executive director and program staff, for cultivating relationships with industry engineers and recruiters, as well as mentors, to enhance students’ educational and career opportunities.

7. Responsible, together with the faculty co-director, for overall operations of the GEL program, the UPOP program, and the Communication Lab. Direct supervision responsibility includes the GEL executive director, the UPOP manager (or the UPOP staff directly in the event that a separate UPOP manager position is not filled), the Communication Lab program manager, the manager of finance and administration, the Graduate Program lead (in conjunction with the GEL executive director), and other personnel, as appropriate.

8. Help to attract practicing engineers, and external companies, to participate in and contribute to program activities in GEL, UPOP and Comm Lab.

9. Promote the programs (GEL, UPOP and Comm Lab) to faculty, department heads, campus organizations, MIT administration through individual meetings, literature, etc.

10. Responsible for the financial viability of the GEL program, including setting priorities and budgets and reviewing staffing and expenses (with the GEL faculty co-director and executive director), and raising funds to enable expansion of the program (also with the GEL faculty co-
director and executive director, as well as SoE administration and MIT development staff). Also responsible in a similar way for the UPOP program, as well as the Communication Lab program (which also coordinates and guides additional staff and activities within the participating departments).

11. Responsible, together with faculty co-director, for how the programs fit into and relate to the MIT infrastructure, including maintaining relationships and partnerships with SoE departments, MIT administration, related organizations such as VMS, Deshpande Center, Trust Center for Entrepreneurship, the Sandbox program, SuperUROP, Teaching and Learning Lab, project-oriented engineering classes including departmental capstone classes, student project teams, and liaison with the Resource Development and Alumni Association Offices.

12. Responsible, together with faculty co-director, for expanding the programs within MIT as appropriate, such as for GEL: broadening the undergraduate program, developing and adding graduate and post-doc versions of the program, expanding into the Freshman year (probably with a design course), participating in the Innovation Minor, teaching leadership in project-oriented MIT subjects; for UPOP: expanding into the Freshman year and developing graduate activities; for Comm Lab: expanding into other MIT departments when appropriate and where desired, engaging in outreach to other universities to distribute the model through collaboration and assistance when appropriate. Will also seek ways to leverage synergies between GEL, UPOP and the Communication Lab, etc.

13. Responsible, together with the faculty co-director and program staff, for implementing the gift stipulation that the GEL program will expand the development of engineering leaders to other United States universities, and thus expand engineering leadership capability in the U.S. (see “Purpose of the Program” from the “Excerpts” section). As presently being implemented, this includes:
(a) continuing to support the COMPLETE consortium of engineering leadership programs at about 15 universities in the US and Canada (GEL played a key role in forming this group and plays a key leadership role);
(b) participating actively in the ASEE LEAD division (where again, GEL played a key role in forming and leading this division);
(c) working to promote ABET criteria that support the importance of engineering leadership development; and,
(d) hosting visits from other universities with leadership programs in order to display and promote our program.

14. Recruit GEL advisory board members (together with the GEL faculty co-director and executive director), conduct GEL advisory board meetings and support UPOP and Comm Lab advisory board meetings, and help to implement recommendations for GEL, UPOP and Communication Lab.

15. Together with the faculty co-director, serve on GEL Governing Board and coordinate Governing Board meetings, as directed in the funding document.
16. Together with the faculty co-director and executive director, maintain a positive relationship with the founding donor, Bernie Gordon, and/or his successor in the Gordon Charitable Trust. This also involves working with MIT faculty and staff to help them to maintain a positive relationship with Bernie.

**Responsibilities and Duties as Senior Lecturer (or Professor of the Practice if qualified):**

It is anticipated that the Industry Co-Director will also be appointed as a Senior Lecturer and will instruct or co-instruct courses within the GEL and UPOP programs. If appropriate, the Senior Lecturer (or PoP) will also be assigned to a department and will participate in department activities, normally teach at least one academic subject per year, and participate in research and student advising to the extent feasible (approximately 25% time).

**QUALIFICATIONS:**

At least 10-15 years of exemplary product development* and leadership experience in industry is the most important part of the industry co-director qualification. A PhD in an engineering discipline is desirable but not necessary, together with teaching and research experience and familiarity with leadership education. At least 10 years of hands-on experience in an engineering capacity, including successful bench experience in product development and delivery, five-plus years of senior managerial experience and leadership responsibility (such as Chief Technology Officer, Director or VP of Engineering, President, or CEO) in a successful endeavor. Should have at least 10 years of experience in delivering products to spec, on time, and within budget. Should possess an entrepreneurial mindset, an unwavering commitment to success, and a deep passion for transforming engineering leadership development in an academic environment. Requires excellent written and oral communication skills, an ability to interface with a wide variety of academic and industry stakeholders, and a strong empathy with and commitment to the GEL/UPOP/Comm Lab staff and students. Familiarity with the MIT culture and ecosystem is a plus.