

Interim Requirementsⁱ for the Graduate Program in Engineering Leadership's MIT Graduate Certificate in Technical Leadership

WHO QUALIFIES

Our interim certificate will be available to all MIT graduate students who satisfy the requirements I through III described below.

REQUIREMENTS

- I. **Completion of 6.928/16.990/15.674 Leading Creative Teams with at least a B Grade.**

- II. **Completion of 12 or more units from any of the following graduate classes with at least a B grade:**
 - A. Graduate Engineering Leadership Program (GradEL) classes
 - 6.S976 – Engineering Leadership in the Age of IA (12 units)
 - 6.S978 – Negotiation and Influence Skills for Technical Leaders (6 units)
 - 6.S979 – Multi-stakeholder Negotiations for Technical Experts (6 units)
 - B. Or, Graduate leadership-related classes offered elsewhere at MIT (see list below*)

- III. **Attending at least FOUR of the following series of SIX virtual workshops during the spring 2021 semester.** Some pre-work may be involved and students must attend the entire session to receive credit. This will be a non-credit bearing requirement. All workshops will occur in Zoom from 5:30p.m. – 7:30p.m. with exception of the first on March 4, which is planned for 5:00p.m. – 7:30p.m.
 - **Welcome back: Building community and solving problems in virtual teams**
Led by David Niño and GradSAGE. Thursday, March 4 2021.
Creative problem solving is challenging in a virtual team environment but it's a valuable skill that we can build together. In this workshop, you will get to know your peers while tackling puzzles and problems in small virtual groups. By the end, you will gain valuable insights on virtual teamwork and how to lead problem solving interactions in online environments.

 - **The R&D/Innovation role in bringing a strategic choice to life**
Led by Reza Rahaman. Thursday, March 18, 2021.
This workshop will look at the types of strategic choices that face organizations and the role of R&D and Innovation in bringing these strategic choices to Life. We will use a Harvard Business School case study on the Clorox Company to look at potential strategic choices and then the personal experience of the workshop leader to give insight into the period immediately following the case study – we will look at how one of the actual strategic choices was brought to life by R&D and Innovation and the tradeoffs and constraints involved.

 - **Technology and Finance: What technical leaders need to know about dollars and sense**
Led by Olivier L. de Weck. Tuesday, April 6, 2021.
This workshop will focus on the relationship between corporate finance and R&D investments in

technology. We review the foundations in corporate finance including reading a balance sheet, analyzing a profit and loss statement (P/L) and showing how R&D projects are one of the vital links between the short term and long term view of a company's financial posture. Student participants will select a company of their interest ahead of time and work in teams of two to carry out an initial analysis. This workshop will also compare the annual financial performance for 2019 and 2020 to assess the impact of the COVID-19 pandemic on the firm (negative, positive or neutral).

- **Foundations for Ethical Action and Integrity in Engineering**

Led by James Magarian. Wednesday April 14, 2021.

This workshop centers on an interactive case analysis in small student groups. An introductory lesson frames the decision-making of technical professionals in terms of integrity and professional ethics concepts. Tools for decision analysis are presented, and students develop awareness of contextual variables that tend to strain integrity. Session concludes with case analysis debrief.

- **Managing Up Your Advisor or Supervisor**

Led by Diana Chien and Jesse Dunietz. Tuesday, April 27, 2021.

Our relationships with research advisors and professional supervisors have a tremendous effect on our well-being and growth. This workshop will teach principles and skills to help you “manage up” your supervisors here at MIT and beyond, creating more positive, productive working relationships. Skills will include identifying the overlap between your interests and your advisor's, advocating for your own needs, and optimizing your day-to-day interactions.

- **Taking charge of new roles: Strategies for your first 90 days**

Led by David Niño and Albert Atkins. Tuesday, May 11 2021.

Our session will build your abilities in managing your transition from graduate school into new professional roles. The workshop is designed for students who are graduating but the lessons about “taking charge” apply to broader leadership situations. This session will differ from last year's and David will be joined by Albert Atkins, Managing Director of Air Liquide Colombia. As a senior executive, Albert will share his global experiences in “taking charge” of new roles and provide more industry perspectives on this important capability

***II.B. Other acceptable graduate leadership-related classes**

10.807/15.371 Innovation Teams

15.270 Ethical Practice: Leading Through Professionalism, Social Responsibility, and System Design

15.281 Advanced Leadership Communications

15.304 Being Effective: Power and Influence

15.310 People, Teams, and Organizations

15.318 Discovering your Leadership Signature

15.320 Strategic Organizational Design

15.321 Improvisational Leadership: In the Moment Leadership Skills

15.324 Practical Leadership

15.341 Individuals, Groups, and Organizations

15.374 Organizing for Innovation

15.386 Managing in Adversity

15.398 Corporations at the Crossroads: The CEO Perspective
15.661 Building Successful Careers and Organizations
15.665 Power and Negotiation
15.669 Strategies for People Analytics
16.887 / EM.427 Technology Road Mapping and Development
EM.413 Foundations of System Design and Management III
STS.482[J] Science, Technology, and Public Policy

** Send academic and all other questions to David Niño at dnino@mit.edu and Lisa Stagnone at lstag@mit.edu.*

ⁱThese requirements will apply for a limited time during 2021. A permanent set of requirements will follow from the Graduate Program in Engineering Leadership Program curriculum design process and in consultation with the Graduate Advisory Group to the School of Engineering (GradSAGE).