LEADERS FOR GLOBAL OPERATIONS MBA AND SM IN ENGINEERING

Master of Business Administration (or Master of Science in Management) and Master of Science in Aeronautics and Astronautics

Leaders for Global Operations (*http://catalog.mit.edu/interdisciplinary/graduate-programs/leaders-global-operations*)

MBA Program Requirements

MBA Coursework [1]		
15.002	Leadership Challenges for an Inclusive World [2]	1
15.010	Economic Analysis for Business Decisions	9
15.280	Communication for Leaders	9
15.311	Organizational Processes	9
15.515	Financial Accounting	9
MBA Core Elective		**9**
Select one of the following subjects:		
15.401	Managerial Finance	
15.814	Marketing Innovation	
15.900	Competitive Strategy	
Leaders for Global Operations Content		
15.086	Engineering Probability	3
15.316	Building and Leading Effective Teams	4
15.317	Leadership and Organizational Change [3]	12
15.761	Introduction to Operations Management [4]	9
15.769	Operations Strategy	9
15.792[J]	Global Operations Leadership Seminar [5]	4
15.794	Research Project in Operations [6]	18
One 3-unit subject in lean operations		3
One 3-unit practical leadership subject		3
One 6-unit plant tour and partner integration subject		6
Unrestricted Electives		
Select at least 40 units of graduate-level subjects. No more than three subjects can be taken in departments other than Management. [7]		40
Total Units		**157**

1 *LGO students do not take 15.060 Data, Models, and Decisions in the MBA core.*

2 *LGO students must complete Ethics Module only of MBA Core LEAD Requirement.*

3 *Taken during the first summer and final spring for 6 units each, with deliverables during LGO internship on-site period.*

4 *For Operations Research students, this subject is usually approved as an OR Elective.*

5 *This 2-unit subject is taken twice during the program.*

6 *Taken over multiple terms for a total of 18 units.*

7 *Operations Research students must take 15.066[J] System Optimization and Analysis for Operations and 15.087 Engineering Statistics and Data Science as part of their electives.*

SM in Aeronautics and Astronautics Program Requirements

LGO Required Engineering Subjects [1]		
15.066[J]	System Optimization and Analysis for Operations	12
15.087	Engineering Statistics and Data Science	12
One 3-unit subject in Python [2]		
Aero/Astro Required Subjects [3]		**21**
At least two graduate courses in Aeronautics and Astronautics, chosen with the advisor		
Engineering Electives [3]		**21**
At least two graduate-level engineering subjects, chosen in consultation with the advisor		
Thesis (X.THG) [4]		**24**
Total Units		**90**

1 *Completion of 15.066[J] and 15.087 fulfill the Aero/Astro Math Requirement for LGO students.*

2 *This subject is taught at the undergraduate level and does not count toward the units required for the degree.*

3 *The number of units for Aero/Astro Required Subjects and for Engineering Electives represent the minimum requirement. Actual units may be higher based on the subjects chosen.*

4 *All LGO students must fulfill the 24#unit minimum dual-degree thesis requirement based on the internship. By incorporating management and engineering content from the respective specialty, students fulfill the thesis requirement for the Master of Business Administration (or Master of Science in Management) and the Master of Science in the engineering specialty. The thesis units are applied to the home department (through which the student applied to LGO) and the thesis subject number registration depends on the student's primary department. Consult the LGO program guide or program officer prior to thesis registration.*

Master of Business Administration (or Master of Science in Management) and Master of Science in Chemical Engineering

Leaders for Global Operations (*http://catalog.mit.edu/interdisciplinary/graduate-programs/leaders-global-operations*)

MBA Program Requirements Program Requirements

MBA Coursework [1]		
15.002	Leadership Challenges for an Inclusive World [2]	1
15.010	Economic Analysis for Business Decisions	9
15.280	Communication for Leaders	9
15.311	Organizational Processes	9
15.515	Financial Accounting	9
MBA Core Elective		**9**
Select one of the following subjects:		
15.401	Managerial Finance	
15.814	Marketing Innovation	
15.900	Competitive Strategy	
Leaders for Global Operations Content		
15.086	Engineering Probability	3
15.316	Building and Leading Effective Teams	4
15.317	Leadership and Organizational Change [3]	12
15.761	Introduction to Operations Management [4]	9
15.769	Operations Strategy	9
15.792[J]	Global Operations Leadership Seminar [5]	4
15.794	Research Project in Operations [6]	18
One 3-unit subject in lean operations		3
One 3-unit practical leadership subject		3
One 6-unit plant tour and partner integration subject		6
Unrestricted Electives		
Select at least 40 units of graduate-level subjects. No more than three subjects can be taken in departments other than Management. [7]		40
Total Units		**157**

1. *LGO students do not take 15.060 Data, Models, and Decisions in the MBA core.*
2. *LGO students must complete Ethics Module only of MBA Core LEAD Requirement.*
3. *Taken during the first summer and final spring for 6 units each, with deliverables during LGO internship on-site period.*
4. *For Operations Research students, this subject is usually approved as an OR Elective.*
5. *This 2-unit subject is taken twice during the program.*
6. *Taken over multiple terms for a total of 18 units.*
7. *Operations Research students must take 15.066[J] System Optimization and Analysis for Operations and 15.087 Engineering Statistics and Data Science as part of their electives.*

SM in Chemical Engineering Program Requirements

LGO Required Engineering Subjects		
15.066[J]	System Optimization and Analysis for Operations	12
15.087	Engineering Statistics and Data Science	12
One 3-unit subject in Python [1]		
Chemical Engineering Required Subjects		**21-24**
Select two of the following subjects:		
10.34	Numerical Methods Applied to Chemical Engineering	
10.40	Chemical Engineering Thermodynamics	
10.50	Analysis of Transport Phenomena	
10.65	Chemical Reactor Engineering	
Engineering Electives [2]		**18-21**
Graduate subjects in Chemical Engineering, chosen in consultation with the advisor [3]		
Thesis (X.THG) [4]		**24**
Total Units		**90**

1. *This subject is taught at the undergraduate level and does not count toward the units required for the degree.*
2. *The number of Engineering Electives units represent the minimum requirement. Actual units may be higher based on the subjects chosen.*
3. *See Chemical Engineering subjects (http://catalog.mit.edu/subjects/10).*
4. *The thesis fulfills thesis requirements for the Master of Business Administration (or Master of Science in Management) and the Master of Science in the engineering specialty. All LGO students must fulfill the 24#unit minimum thesis requirement based on the internship. The thesis units are applied to the home department (where a student has applied to LGO) and the thesis subject number registration depends on the student's primary department. Consult the LGO program guide or program officer prior to thesis registration.*

Master of Business Administration (or Master of Science in Management) and Master of Science in Civil and Environmental Engineering

Leaders for Global Operations (*http://catalog.mit.edu/interdisciplinary/graduate-programs/leaders-global-operations*)

MBA Program Requirements

MBA Coursework [1]		
15.002	Leadership Challenges for an Inclusive World [2]	1
15.010	Economic Analysis for Business Decisions	9
15.280	Communication for Leaders	9
15.311	Organizational Processes	9
15.515	Financial Accounting	9
MBA Core Elective		**9**
Select one of the following subjects:		
15.401	Managerial Finance	
15.814	Marketing Innovation	
15.900	Competitive Strategy	
Leaders for Global Operations Content		
15.086	Engineering Probability	3
15.316	Building and Leading Effective Teams	4
15.317	Leadership and Organizational Change [3]	12
15.761	Introduction to Operations Management [4]	9
15.769	Operations Strategy	9
15.792[J]	Global Operations Leadership Seminar [5]	4
15.794	Research Project in Operations [6]	18
One 3-unit subject in lean operations		3
One 3-unit practical leadership subject		3
One 6-unit plant tour and partner integration subject		6
Unrestricted Electives		
Select at least 40 units of graduate-level subjects. No more than three subjects can be taken in departments other than Management. [7]		40
Total Units		**157**

1. *LGO students do not take 15.060 Data, Models, and Decisions in the MBA core.*
2. *LGO students must complete Ethics Module only of MBA Core LEAD Requirement.*
3. *Taken during the first summer and final spring for 6 units each, with deliverables during LGO internship on-site period.*
4. *For Operations Research students, this subject is usually approved as an OR Elective.*
5. *This 2-unit subject is taken twice during the program.*
6. *Taken over multiple terms for a total of 18 units.*
7. *Operations Research students must take 15.066[J] System Optimization and Analysis for Operations and 15.087 Engineering Statistics and Data Science as part of their electives.*

SM in Civil and Environmental Engineering Program Requirements

LGO Required Engineering Subjects		
15.066[J]	System Optimization and Analysis for Operations	12
15.087	Engineering Statistics and Data Science	12
One 3-unit subject in Python [1]		
Civil and Environmental Engineering Subjects		**36**
Graduate-level subjects in CEE [2]		
Engineering Electives		
Any graduate-level engineering subject(s) [3]		6
Thesis (X.THG) [4]		**24**
Total Units		**90**

1. *This subject is taught at the undergraduate level and does not count toward the units required for the degree.*
2. *Chosen CEE subjects (http://catalog.mit.edu/subjects/1) cannot be cross-listed with Management subjects (15.XX) unless approved by the advisor.*
3. *The number of Engineering Electives units represents the minimum requirement. Actual units may be higher based on the subjects chosen.*
4. *All LGO students must fulfill the 24#unit minimum dual-degree thesis requirement based on the internship. By incorporating management and engineering content from the respective specialty, students fulfill the thesis requirement for the Master of Business Administration (or Master of Science in Management) and the Master of Science in the engineering specialty. The thesis units are applied to the home department (through which the student applied to LGO) and the thesis subject number registration depends on the student's primary department. Consult the LGO program guide or program officer prior to thesis registration.*

Master of Business Administration (or Master of Science in Management) and Master of Science in Electrical Engineering and Computer Science

Leaders for Global Operations (*http://catalog.mit.edu/interdisciplinary/graduate-programs/leaders-global-operations*)

MBA Program Requirements

MBA Coursework [1]		
15.002	Leadership Challenges for an Inclusive World [2]	1
15.010	Economic Analysis for Business Decisions	9
15.280	Communication for Leaders	9
15.311	Organizational Processes	9
15.515	Financial Accounting	9
MBA Core Elective		**9**
Select one of the following subjects:		
15.401	Managerial Finance	
15.814	Marketing Innovation	
15.900	Competitive Strategy	
Leaders for Global Operations Content		
15.086	Engineering Probability	3
15.316	Building and Leading Effective Teams	4
15.317	Leadership and Organizational Change [3]	12
15.761	Introduction to Operations Management [4]	9
15.769	Operations Strategy	9
15.792[J]	Global Operations Leadership Seminar [5]	4
15.794	Research Project in Operations [6]	18
One 3-unit subject in lean operations		3
One 3-unit practical leadership subject		3
One 6-unit plant tour and partner integration subject		6
Unrestricted Electives		
Select at least 40 units of graduate-level subjects. No more than three subjects can be taken in departments other than Management. [7]		40
Total Units		**157**

1. *LGO students do not take 15.060 Data, Models, and Decisions in the MBA core.*
2. *LGO students must complete Ethics Module only of MBA Core LEAD Requirement.*
3. *Taken during the first summer and final spring for 6 units each, with deliverables during LGO internship on-site period.*
4. *For Operations Research students, this subject is usually approved as an OR Elective.*
5. *This 2-unit subject is taken twice during the program.*
6. *Taken over multiple terms for a total of 18 units.*
7. *Operations Research students must take 15.066[J] System Optimization and Analysis for Operations and 15.087 Engineering Statistics and Data Science as part of their electives.*

SM in Electrical Engineering and Computer Science Program Requirements

LGO Required Engineering Subjects		
15.066[J]	System Optimization and Analysis for Operations	12
15.087	Engineering Statistics and Data Science	12
One 3-unit subject in Python [1]		
EECS Electives [2]		**42**
EECS graduate subjects, chosen in consultation with advisor [2, 3]		
Thesis (X.THG) [4]		**24**
Total Units		**90**

1. *This subject is taught at the undergraduate level and does not count toward the units required for the degree.*
2. *The number of units for EECS Electives (http://catalog.mit.edu/subjects/6) represent the minimum requirement. Actual units may be higher based on the subjects chosen.*
3. *LGO EECS students fulfill one unit of the Professional Perspective requirement for EECS master's students through 15.794 with research at internship.*
4. *All LGO students must fulfill the 24#unit minimum dual-degree thesis requirement based on the internship. By incorporating management and engineering content from the respective specialty, students fulfill the thesis requirement for the Master of Business Administration (or Master of Science in Management) and the Master of Science in the engineering specialty. The thesis units are applied to the home department (through which the student applied to LGO) and the thesis subject number registration depends on the student's primary department. Consult the LGO program guide or program officer prior to thesis registration.*

Master of Business Administration (or Master of Science in Management) and Master of Science in Mechanical Engineering

Leaders for Global Operations (*http://catalog.mit.edu/interdisciplinary/graduate-programs/leaders-global-operations*)

MBA Program Requirements

MBA Coursework [1]		
15.002	Leadership Challenges for an Inclusive World [2]	1
15.010	Economic Analysis for Business Decisions	9
15.280	Communication for Leaders	9
15.311	Organizational Processes	9
15.515	Financial Accounting	9
MBA Core Elective		**9**
Select one of the following subjects:		
15.401	Managerial Finance	
15.814	Marketing Innovation	
15.900	Competitive Strategy	
Leaders for Global Operations Content		
15.086	Engineering Probability	3
15.316	Building and Leading Effective Teams	4
15.317	Leadership and Organizational Change [3]	12
15.761	Introduction to Operations Management [4]	9
15.769	Operations Strategy	9
15.792[J]	Global Operations Leadership Seminar [5]	4
15.794	Research Project in Operations [6]	18
One 3-unit subject in lean operations		3
One 3-unit practical leadership subject		3
One 6-unit plant tour and partner integration subject		6
Unrestricted Electives		
Select at least 40 units of graduate-level subjects. No more than three subjects can be taken in departments other than Management. [7]		40
Total Units		**157**

1. *LGO students do not take 15.060 Data, Models, and Decisions in the MBA core.*
2. *LGO students must complete Ethics Module only of MBA Core LEAD Requirement.*
3. *Taken during the first summer and final spring for 6 units each, with deliverables during LGO internship on-site period.*
4. *For Operations Research students, this subject is usually approved as an OR Elective.*
5. *This 2-unit subject is taken twice during the program.*
6. *Taken over multiple terms for a total of 18 units.*
7. *Operations Research students must take 15.066[J] System Optimization and Analysis for Operations and 15.087 Engineering Statistics and Data Science as part of their electives.*

SM in Mechanical Engineering Program Requirements

LGO Required Engineering Subjects		
15.066[J]	System Optimization and Analysis for Operations	12
15.087	Engineering Statistics and Data Science	12
One 3-unit subject in Python [1]		
Mechanical Engineering Required Subjects		
Three 12-unit graduate subjects in Mechanical Engineering [2, 3]		36
Engineering Electives		**12**
Any graduate engineering subject [3]		
Thesis (X.THG) [4]		**24**
Total Units		**96**

1. *This subject is taught at the undergraduate level and does not count toward the units required for the degree.*
2. *Chosen Mechanical Engineering subjects (http://catalog.mit.edu/subjects/2) cannot be cross-listed with Management subjects (15.XX) unless approved by the advisor.*
3. *Subject(s) must be chosen in consultation with advisor.*
4. *All LGO students must fulfill the 24#unit minimum dual-degree thesis requirement based on the internship. By incorporating management and engineering content from the respective specialty, students fulfill the thesis requirement for the Master of Business Administration (or Master of Science in Management) and the Master of Science in the engineering specialty. The thesis units are applied to the home department (through which the student applied to LGO) and the thesis subject number registration depends on the student's primary department. Consult the LGO program guide or program officer prior to thesis registration.*

Master of Business Administration (or Master of Science in Management) and Master of Science in Nuclear Science and Engineering

Leaders for Global Operations (*http://catalog.mit.edu/interdisciplinary/graduate-programs/leaders-global-operations*)

MBA Program Requirements

MBA Coursework [1]		
15.002	Leadership Challenges for an Inclusive World [2]	1
15.010	Economic Analysis for Business Decisions	9
15.280	Communication for Leaders	9
15.311	Organizational Processes	9
15.515	Financial Accounting	9
MBA Core Elective		**9**
Select one of the following subjects:		
15.401	Managerial Finance	
15.814	Marketing Innovation	
15.900	Competitive Strategy	
Leaders for Global Operations Content		
15.086	Engineering Probability	3
15.316	Building and Leading Effective Teams	4
15.317	Leadership and Organizational Change [3]	12
15.761	Introduction to Operations Management [4]	9
15.769	Operations Strategy	9
15.792[J]	Global Operations Leadership Seminar [5]	4
15.794	Research Project in Operations [6]	18
One 3-unit subject in lean operations		3
One 3-unit practical leadership subject		3
One 6-unit plant tour and partner integration subject		6
Unrestricted Electives		
Select at least 40 units of graduate-level subjects. No more than three subjects can be taken in departments other than Management. [7]		40
Total Units		**157**

1. *LGO students do not take 15.060 Data, Models, and Decisions in the MBA core.*
2. *LGO students must complete Ethics Module only of MBA Core LEAD Requirement.*
3. *Taken during the first summer and final spring for 6 units each, with deliverables during LGO internship on-site period.*
4. *For Operations Research students, this subject is usually approved as an OR Elective.*
5. *This 2-unit subject is taken twice during the program.*
6. *Taken over multiple terms for a total of 18 units.*
7. *Operations Research students must take 15.066[J] System Optimization and Analysis for Operations and 15.087 Engineering Statistics and Data Science as part of their electives.*

SM in Nuclear Science and Engineering Program Requirements

LGO Required Engineering Subjects		
15.066[J]	System Optimization and Analysis for Operations	12
15.087	Engineering Statistics and Data Science	12
One 3-unit subject in Python [1]		
NSE Required Subjects		
Two specialized subjects in NSE [2]		24
Select two of the following subjects:		12
22.11	Applied Nuclear Physics	
22.12	Radiation Interactions, Control, and Measurement	
22.13	Nuclear Energy Systems	
22.14	Materials in Nuclear Engineering	
22.15	Essential Numerical Methods	
22.16	Nuclear Technology and Society	
Engineering Electives		
Any graduate subject in engineering [3, 4]		6
Thesis (X.THG) [5]		**24**
Total Units		**90**

1. *This subject is taught at the undergraduate level and does not count toward the units required for the degree.*
2. *Recommended fields of specialization include nuclear reactor engineering, nuclear reactor physics, nuclear materials, fusion, nuclear security policy, and nuclear science and technology.*
3. *The number of units for Engineering Electives represents the minimum requirement. Actual units may be higher based on the subjects chosen.*
4. *Consult department for restrictions.*
5. *All LGO students must fulfill the 24#unit minimum dual-degree thesis requirement based on the internship. By incorporating management and engineering content from the respective specialty, students fulfill the thesis requirement for the Master of Business Administration (or Master of Science in Management) and the Master of Science in the engineering specialty. The thesis units are applied to the home department (through which the student applied to LGO) and the thesis subject number registration depends on the student's primary department. Consult the LGO program guide or program officer prior to thesis registration.*

Master of Business Administration (or Master of Science in Management) and Master of Science in Operations Research

Leaders for Global Operations (*http://catalog.mit.edu/interdisciplinary/graduate-programs/leaders-global-operations*)

MBA Program Requirements

MBA Coursework [1]		
15.002	Leadership Challenges for an Inclusive World [2]	1
15.010	Economic Analysis for Business Decisions	9
15.280	Communication for Leaders	9
15.311	Organizational Processes	9
15.515	Financial Accounting	9
MBA Core Elective		**9**
Select one of the following subjects:		
15.401	Managerial Finance	
15.814	Marketing Innovation	
15.900	Competitive Strategy	
Leaders for Global Operations Content		
15.086	Engineering Probability	3
15.316	Building and Leading Effective Teams	4
15.317	Leadership and Organizational Change [3]	12
15.761	Introduction to Operations Management [4]	9
15.769	Operations Strategy	9
15.792[J]	Global Operations Leadership Seminar [5]	4
15.794	Research Project in Operations [6]	18
One 3-unit subject in lean operations		3
One 3-unit practical leadership subject		3
One 6-unit plant tour and partner integration subject		6
Unrestricted Electives		
Select at least 40 units of graduate-level subjects. No more than three subjects can be taken in departments other than Management. [7]		40
Total Units		**157**

1. *LGO students do not take 15.060 Data, Models, and Decisions in the MBA core.*
2. *LGO students must complete Ethics Module only of MBA Core LEAD Requirement.*
3. *Taken during the first summer and final spring for 6 units each, with deliverables during LGO internship on-site period.*
4. *For Operations Research students, this subject is usually approved as an OR Elective.*
5. *This 2-unit subject is taken twice during the program.*
6. *Taken over multiple terms for a total of 18 units.*
7. *Operations Research students must take 15.066[J] System Optimization and Analysis for Operations and 15.087 Engineering Statistics and Data Science as part of their electives.*

SM in Operations Research Program Requirements

Operations Research Required Subjects		
15.095	Machine Learning Under a Modern Optimization Lens [1]	12
6.3702	Introduction to Probability	12
or 6.7700[J]	Fundamentals of Probability	
6.7200[J]	Optimization Methods	12
or 6.7210[J]	Introduction to Mathematical Programming	
Operations Research Electives [2]		**30**
Four OR-focused graduate subjects, chosen in consultation with advisor		
Thesis (X.THG) [3]		**24**
Total Units		**90**

1. *This subject can be substituted with another suitable statistics subject (e.g., 6.7900 Machine Learning, 6.7910[J] Statistical Learning Theory and Applications, 14.382 Econometrics) with approval of advisor.*
2. *The number of units for Operations Research Electives represents the minimum requirement. Actual units may be higher based on the subjects chosen. Generally includes 15.761 of the LGO required curriculum.*
3. *All LGO students must fulfill the 24#unit minimum dual-degree thesis requirement based on the internship. By incorporating management and engineering content from the respective specialty, students fulfill the thesis requirement for the Master of Business Administration (or Master of Science in Management) and the Master of Science in the engineering specialty. The thesis units are applied to the home department (through which the student applied to LGO) and the thesis subject number registration depends on the student's primary department. Consult the LGO program guide or program officer prior to thesis registration.*