MASTER'S DEGREES IN SUPPLY CHAIN MANAGEMENT

Supply Chain Management Program (http://catalog.mit.edu/interdisciplinary/graduate-programs/supply-chain-management)

Master of Applied Science in Supply Chain Management (Residential Program)

The Master of Applied Science in Supply Chain Management degree is an intensive, 10-month residential program requiring 90 units of graduate subjects. Students complete at least 81 units of required and elective subjects and complete a 9-unit capstone project. The subject requirements for this program are described below.

**Subject Requirements**

**Fall Required Subjects**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCM.250</td>
<td>Analytical Methods for Supply Chain Management I</td>
<td>6</td>
</tr>
<tr>
<td>SCM.259</td>
<td>Written Communication for Supply Chain Management</td>
<td>3</td>
</tr>
<tr>
<td>SCM.260[J]</td>
<td>Logistics Systems</td>
<td>12</td>
</tr>
<tr>
<td>SCM.264</td>
<td>Databases and Data Analysis for Supply Chain Management</td>
<td>6</td>
</tr>
<tr>
<td>SCM.800</td>
<td>Capstone Project in Supply Chain Management</td>
<td>3</td>
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</tbody>
</table>

**IAP Required Subjects**

<table>
<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>SCM.254</td>
<td>Analytical Methods for Supply Chain Management II</td>
<td>3</td>
</tr>
<tr>
<td>SCM.262</td>
<td>Leading Global Teams</td>
<td>3</td>
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**Spring Required Subjects**

<table>
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<tr>
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<th>Units</th>
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<tbody>
<tr>
<td>SCM.263</td>
<td>Advanced Writing Workshop for SCM</td>
<td>3</td>
</tr>
<tr>
<td>SCM.281</td>
<td>Supply Chain Public Speaking Workshop</td>
<td>1</td>
</tr>
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<td>SCM.800</td>
<td>Capstone Project in Supply Chain Management</td>
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<tbody>
<tr>
<td>SCM.256</td>
<td>Data Science and Machine Learning for Supply Chain Management</td>
<td>12</td>
</tr>
<tr>
<td>or SCM.C51 &amp; 6.C51</td>
<td>Machine Learning Applications for Supply Chain Management and Modeling with Machine Learning: from Algorithms to Applications</td>
<td></td>
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</table>

**Required Electives**

Select 1 elective in each of the following categories, plus additional electives to meet unit requirement:

- **Finance Electives**
  - SCM.251 Supply Chain Financial Analysis 4 | 9
  - SCM.253 Case Studies in Supply Chain Financial Analysis | 6
  - 15.011 Economic Analysis for Business Decisions | 9
  - 15.401 Managerial Finance | 9
  - 15.521 Accounting Information for Decision Makers | 6

- **Supply Chain Electives**
  - SCM.261[J] Case Studies in Logistics and Supply Chain Management | 6
  - SCM.265[J] Global Supply Chain Management | 6
  - SCM.266 Freight Transportation | 6
  - SCM.283 Humanitarian Logistics | 6
  - SCM.284 Humanitarian Logistics Project | 6
  - SCM.289 E-Commerce and Omnichannel Fulfillment Strategies | 6
  - SCM.290 Sustainable Supply Chain Management | 6
  - SCM.291 Procurement Fundamentals | 6
  - SCM.293[J] Urban Last-Mile Logistics | 6
  - SCM.294 Digital Supply Chain Transformation | 6

- **Analysis Electives**
  - 1.200[J] Transportation: Foundations and Methods | 12
  - 1.266 Supply Chain and Demand Analytics | 6
  - 15.071 The Analytics Edge | 12

1. Students who have already successfully completed one of the required subjects at a graduate level elsewhere may petition to replace that subject with another elective.

2. With the approval of the instructor, students may substitute SCM.271 Logistics Systems Topics (3 units) plus 9 additional units of electives.

3. With the approval of the instructor, students may substitute SCM.274 Databases and Data Analysis Topics for Supply Chain Management (3 units) plus 3 additional units of electives.

4. With the permission of the program director, students may substitute SCM.253 Case Studies in Supply Chain Financial Analysis (6 units) plus 3 additional units of electives.
### Master of Engineering in Supply Chain Management (Residential Program)

The Master of Engineering in Supply Chain Management degree is an intensive, 10-month residential program requiring 90 units of graduate subjects. Students complete at least 78 units of required and elective subjects, and complete a 12-unit thesis. The subject requirements for this program are described below.

### Subject Requirements

#### Fall Required Subjects

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<td>6</td>
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<tr>
<td>SCM.THG</td>
<td>Graduate Thesis</td>
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#### IAP Required Subjects

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<td>SCM.C51</td>
<td>Machine Learning Applications for Supply Chain Management</td>
<td>6</td>
</tr>
<tr>
<td>6.C51</td>
<td>Modeling with Machine Learning: from Algorithms to Applications</td>
<td>6</td>
</tr>
<tr>
<td>SCM.THG</td>
<td>Graduate Thesis</td>
<td>9</td>
</tr>
</tbody>
</table>

#### Required Electives

Select 1 elective in each of the following categories, plus additional electives to meet unit requirement:

- Finance Electives
- Supply Chain Electives
- Analysis Electives
- Management Electives

#### Total Units

90

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1. Students who have already successfully completed one of the required subjects at a graduate level elsewhere may petition to replace that subject with another elective.
2. With the approval of the instructor, students may substitute SCM.271 Logistics Systems Topics (3 units) plus 9 additional units of electives.
3. With the approval of the instructor, students may substitute SCM.274 Databases and Data Analysis Topics for Supply Chain Management (3 units) plus 3 additional units of electives.
4. With the permission of the program director, students may substitute SCM.253 Case Studies in Supply Chain Financial Analysis (6 units) plus 3 additional units of electives.

### Electives

The subjects listed below are recommended but other choices can be approved by the graduate advisor.

#### Finance Electives

<table>
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<tr>
<th>Subject Code</th>
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<tbody>
<tr>
<td>SCM.251</td>
<td>Supply Chain Financial Analysis</td>
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Master of Applied Science in Supply Chain Management (Blended Program)

The Master of Applied Science in Supply Chain Management degree is an intensive, five-month blended program requiring 90 units of graduate subjects. The MASc degree is only available to students who have successfully completed the MITx MicroMasters credential in Supply Chain Management. Students receive 42 units of advance standing credit for completion of the MicroMasters Credential, complete at least 39 units of required and elective subjects, and complete a 9-unit capstone project. The subject requirements for this program are described below.

Subject Requirements

Students receive advanced standing credit for completion of the MicroMasters Credential, which constitutes the first semester of the program.

SCM.500 Studies in Supply Chain Management 42

Students complete the following subjects in residence, constituting the second semester of the program.

IAP Required Subjects

SCM.258 Written Communication Topics for Supply Chain Management 1
SCM.292 Leading Global Teams 3
SCM.294 Analytical Methods for Supply Chain Management II 3

Spring Required Subjects

SCM.263 Advanced Writing Workshop for SCM 3
SCM.281 Supply Chain Public Speaking Workshop 1
MASTER'S DEGREES IN SUPPLY CHAIN MANAGEMENT

SCM.256 Data Science and Machine Learning for Supply Chain Management 12
or SCM.C51 & 6.C51 Machine Learning Applications for Supply Chain Management and Modeling with Machine Learning: from Algorithms to Applications

Capstone Requirement
A capstone report, presentation, and executive summary of the project are required.

SCM.800 Capstone Project in Supply Chain Management 9

Required Electives
Select 1 elective in each of the following categories, plus additional electives to meet unit requirement:

Finance Electives
Supply Chain Electives
Analysis Electives

Total Units 90

Electives
The subjects listed below are recommended. Students may select other subjects with the approval of the advisor.

Finance Electives
SCM.251 Supply Chain Financial Analysis 9
SCM.253 Case Studies in Supply Chain Financial Analysis 6
15.011 Economic Analysis for Business Decisions 9
15.401 Managerial Finance 9
15.521 Accounting Information for Decision Makers 6
15.535 Business Analysis Using Financial Statements 9

Supply Chain Electives
SCM.261[J] Case Studies in Logistics and Supply Chain Management 6
SCM.265[J] Global Supply Chain Management 6
SCM.266 Freight Transportation 6
SCM.283 Humanitarian Logistics 6
SCM.284 Humanitarian Logistics Project 6
SCM.289 E-Commerce and Omnichannel Fulfillment Strategies 6
SCM.290 Sustainable Supply Chain Management 6
SCM.291 Procurement Fundamentals 6
SCM.293[J] Urban Last-Mile Logistics 6
SCM.294 Digital Supply Chain Transformation 6

Analysis Electives
1.266 Supply Chain and Demand Analytics 6
15.071 The Analytics Edge 12
15.093[J] Optimization Methods 12
15.774 The Analytics of Operations Management 12
15.871 Introduction to System Dynamics 6
15.872 System Dynamics II 6
15.873 System Dynamics for Business and Policy 9
IDS.145[J] Data Mining: Finding the Models and Predictions that Create Value 6
IDS.147[J] Statistical Machine Learning and Data Science 12
IDS.305[J] Business and Operations Analytics 6
IDS.330[J] Real Business and Systems Design 6
IDS.333[J] Risk and Decision Analysis 6
IDS.338[J] Multidisciplinary Design Optimization 12

Management Electives
SCM.287[J] Global Aging & the Built Environment 12
15.025 Game Theory for Strategic Advantage 9
15.286 Communicating with Data 6
15.386 Leading in Ambiguity: Steering Through Strategic Inflection Points 6
15.390 New Enterprises 12
15.762[J] Supply Chain: Inventory Analytics 6
15.763[J] Supply Chain: Capacity Analytics 6
15.768 Management of Services: Concepts, Design, and Delivery 9
15.769 Operations Strategy 9
15.777 Healthcare Lab: Introduction to Healthcare Delivery in the United States 15
15.784 Operations Laboratory 9
15.900 Competitive Strategy 9
15.904 Strategy and the CEO 6
15.915 Business Strategies for a Sustainable Future 9
Master of Engineering in Supply Chain Management (Blended Program)

The Master of Engineering in Supply Chain Management degree is an intensive, five-month blended program requiring 90 units of graduate subjects. The MEng degree is only available to students who have successfully completed the MITx MicroMasters credential in Supply Chain Management. Students receive 42 units of advance standing credit for completion of the MicroMasters Credential, complete at least 36 units of required and elective subjects, and complete a 12-unit thesis. The subject requirements for this program are described below.

Subject Requirements
Students receive advanced standing credit for completion of the MicroMasters Credential, which constitutes the first semester of the program.

SCM.500  Studies in Supply Chain Management  42
Students complete the following subjects in residence, constituting the second semester of the program.

IAP Required Subjects
SCM.254  Analytical Methods for Supply Chain Management II  3
SCM.258  Written Communication Topics for Supply Chain Management  1
SCM.262  Leading Global Teams  3

Spring Required Subjects
SCM.263  Advanced Writing Workshop for SCM  3
SCM.281  Supply Chain Public Speaking Workshop  1
SCM.C51  Machine Learning Applications for Supply Chain Management  6
6.C51  Modeling with Machine Learning: from Algorithms to Applications  6

Thesis Requirement
A master's thesis, presentation, and executive summary of the thesis are required.
SCM.THG  Graduate Thesis  12

Required Electives
Select 1 elective in each of the following categories, plus additional electives to meet unit requirement:
Finance Electives
Supply Chain Electives
Analysis Electives

Total Units  90

Electives
The subjects listed below are recommended. Students may select other subjects with the approval of the advisor.

Finance Electives
SCM.251  Supply Chain Financial Analysis  9
SCM.253  Case Studies in Supply Chain Financial Analysis  6
15.011  Economic Analysis for Business Decisions  9
15.401  Managerial Finance  9
15.521  Accounting Information for Decision Makers  6
15.535  Business Analysis Using Financial Statements  9

Supply Chain Electives
SCM.261[J]  Case Studies in Logistics and Supply Chain Management  6
SCM.265[J]  Global Supply Chain Management  6
SCM.266  Freight Transportation  6
SCM.283  Humanitarian Logistics  6
SCM.284  Humanitarian Logistics Project  6
SCM.289  E-Commerce and Omnichannel Fulfillment Strategies  6
SCM.290  Sustainable Supply Chain Management  6
SCM.291  Procurement Fundamentals  6
SCM.293[J]  Urban Last-Mile Logistics  6
SCM.294  Digital Supply Chain Transformation  6

Analysis Electives
1.266  Supply Chain and Demand Analytics  6
15.071  The Analytics Edge  12
15.093[J]  Optimization Methods  12
15.774  The Analytics of Operations Management  12
15.871  Introduction to System Dynamics  6
15.872  System Dynamics II  6
15.873  System Dynamics for Business and Policy  9
IDS.145[J]  Data Mining: Finding the Models and Predictions that Create Value  6
IDS.147[J]  Statistical Machine Learning and Data Science  12
IDS.305[J]  Business and Operations Analytics  6
### Master's Degrees in Supply Chain Management

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<tr>
<th>Course Code</th>
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<th>Credits</th>
</tr>
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<tr>
<td>IDS.330[J]</td>
<td>Real Options for Product and Systems Design</td>
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</tr>
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<td>IDS.333[J]</td>
<td>Risk and Decision Analysis</td>
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</tr>
<tr>
<td>15.386</td>
<td>Leading in Ambiguity: Steering Through Strategic Inflection Points</td>
<td>6</td>
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<tr>
<td>15.390</td>
<td>New Enterprises</td>
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<td>15.762[J]</td>
<td>Supply Chain: Inventory Analytics</td>
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</tr>
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<td>15.763[J]</td>
<td>Supply Chain: Capacity Analytics</td>
<td>6</td>
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<tr>
<td>15.768</td>
<td>Management of Services: Concepts, Design, and Delivery</td>
<td>9</td>
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<tr>
<td>15.769</td>
<td>Operations Strategy</td>
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</tr>
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<tr>
<td>15.784</td>
<td>Operations Laboratory</td>
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