90

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 ¹

Fall Required Subjects			
SCM.250	Analytical Methods for Supply Chain Management I	6	
SCM.259	Written Communication for Supply Chain Management	3	
SCM.260[J]	Logistics Systems ²	12	
SCM.264	Databases and Data Analysis for Supply Chain Management ³	6	
SCM.800	Capstone Project in Supply Chain Management	3	
IAP Required Su	bjects		
SCM.254	Analytical Methods for Supply Chain Management II	3	
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.800	Capstone Project in Supply Chain Management	6	
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		
Required Electiv	es		
Select 1 elective	in each of the following categories,	32	
plus additional e	electives to meet unit requirement:		
Finance Electi	ives		
Supply Chain	Electives		
Analysis Elect	tives		

Management Electives

Total Units

- 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	5	
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
15.535	Business Analysis Using Financial Statements	9
Supply Chain Ele	ectives	
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 Elective	25	
1.200[J]	Transportation: Foundations and Methods	12
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 Options for Product and Systems Design	6
IDS.333[J]	Risk and Decision Analysis	6
IDS.338[J]	Multidisciplinary Design Optimization	12
Management I	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
15.784	Operations Laboratory	9
15.777	Healthcare Lab: Introduction to Healthcare Delivery in the United States	15
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 (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 ¹ **Fall Required Subjects** SCM.250 Analytical Methods for Supply Chain 6 Management I SCM.259 Written Communication for Supply 3 **Chain Management** SCM.260[J] Logistics Systems² 12 Databases and Data Analysis for SCM.264 6 Supply Chain Management³ SCM.THG Graduate Thesis 3 **IAP Required Subjects** SCM.254 Analytical Methods for Supply Chain 3 Management II SCM.262 Leading Global Teams 3 **Spring Required Subjects** SCM.263 Advanced Writing Workshop for SCM 3 SCM.281 Supply Chain Public Speaking 1 Workshop SCM.C51 Machine Learning Applications for 6 Supply Chain Management 6.C51 Modeling with Machine Learning: 6 from Algorithms to Applications SCM.THG Graduate Thesis 9 **Required Electives** Select 1 elective in each of the following categories, 29 plus additional electives to meet unit requirement: **Finance Electives Supply Chain Electives Analysis Electives Management Electives Total Units** 90 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.
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	
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
15.535	Business Analysis Using Financial Statements	9
Supply Chain Ele	ectives	
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 Elective	es	
1.200[J]	Transportation: Foundations and Methods	12
1.200[J] 1.266	Transportation: Foundations and Methods Supply Chain and Demand Analytics	12 6
1.200[J] 1.266 15.071	Transportation: Foundations and Methods Supply Chain and Demand Analytics The Analytics Edge	12 6 12
1.200[J] 1.266 15.071 15.093[J]	Transportation: Foundations and Methods Supply Chain and Demand Analytics The Analytics Edge Optimization Methods	12 6 12 12
1.200[J] 1.266 15.071 15.093[J] 15.774	Transportation: Foundations and Methods Supply Chain and Demand Analytics The Analytics Edge Optimization Methods The Analytics of Operations Management	12 6 12 12 12
1.200[J] 1.266 15.071 15.093[J] 15.774 15.871	Transportation: Foundations and Methods Supply Chain and Demand Analytics The Analytics Edge Optimization Methods The Analytics of Operations Management Introduction to System Dynamics	12 6 12 12 12 12 6
1.200[J] 1.266 15.071 15.093[J] 15.774 15.871 15.872	Transportation: Foundations and Methods Supply Chain and Demand Analytics The Analytics Edge Optimization Methods The Analytics of Operations Management Introduction to System Dynamics System Dynamics II	12 6 12 12 12 12 6 6
1.200[J] 1.266 15.071 15.093[J] 15.774 15.871 15.872 15.873	Transportation: Foundations and Methods Supply Chain and Demand Analytics The Analytics Edge Optimization Methods The Analytics of Operations Management Introduction to System Dynamics System Dynamics II System Dynamics for Business and Policy	12 6 12 12 12 6 6 6 9
1.200[J] 1.266 15.071 15.093[J] 15.774 15.871 15.872 15.873 IDS.145[J]	Transportation: Foundations and Methods Supply Chain and Demand Analytics The Analytics Edge Optimization Methods The Analytics of Operations Management Introduction to System Dynamics System Dynamics II System Dynamics for Business and Policy Data Mining: Finding the Models and Predictions that Create Value	12 6 12 12 12 6 6 9 6
1.200[J] 1.266 15.071 15.093[J] 15.774 15.871 15.872 15.873 IDS.145[J] IDS.147[J]	Transportation: Foundations and Methods Supply Chain and Demand Analytics The Analytics Edge Optimization Methods The Analytics of Operations Management Introduction to System Dynamics System Dynamics II System Dynamics for Business and Policy Data Mining: Finding the Models and Predictions that Create Value Statistical Machine Learning and Data Science	12 6 12 12 12 6 6 9 6 12
1.200[J] 1.266 15.071 15.093[J] 15.774 15.871 15.872 15.873 IDS.145[J] IDS.147[J] IDS.305[J]	Transportation: Foundations and Methods Supply Chain and Demand Analytics The Analytics Edge Optimization Methods The Analytics of Operations Management Introduction to System Dynamics System Dynamics for Business and Policy Data Mining: Finding the Models and Predictions that Create Value Statistical Machine Learning and Data Science Business and Operations Analytics	12 6 12 12 12 6 6 9 6 12 6
1.200[J] 1.266 15.071 15.093[J] 15.774 15.871 15.872 15.873 IDS.145[J] IDS.147[J] IDS.305[J] IDS.330[J]	Transportation: Foundations and Methods Supply Chain and Demand Analytics The Analytics Edge Optimization Methods The Analytics of Operations Management Introduction to System Dynamics System Dynamics for Business and Policy Data Mining: Finding the Models and Predictions that Create Value Statistical Machine Learning and Data Science Business and Operations Analytics Real Options for Product and Systems Design	12 6 12 12 12 6 6 6 12 6 6 6
1.200[J] 1.266 15.071 15.093[J] 15.774 15.871 15.872 15.873 IDS.145[J] IDS.147[J] IDS.305[J] IDS.330[J] IDS.333[J]	Transportation: Foundations and Methods Supply Chain and Demand Analytics The Analytics Edge Optimization Methods The Analytics of Operations Management Introduction to System Dynamics System Dynamics for Business and Policy Data Mining: Finding the Models and Predictions that Create Value Statistical Machine Learning and Data Science Business and Operations Analytics Real Options for Product and Systems Design Risk and Decision Analysis	12 6 12 12 12 6 6 9 6 12 6 6 6 6 6
1.200[J] 1.266 15.071 15.093[J] 15.774 15.871 15.872 15.873 IDS.145[J] IDS.147[J] IDS.305[J] IDS.330[J] IDS.333[J] IDS.338[J]	Transportation: Foundations and Methods Supply Chain and Demand Analytics The Analytics Edge Optimization Methods The Analytics of Operations Management Introduction to System Dynamics System Dynamics for Business and Policy Data Mining: Finding the Models and Predictions that Create Value Statistical Machine Learning and Data Science Business and Operations Analytics Real Options for Product and Systems Design Risk and Decision Analysis Multidisciplinary Design Optimization	12 6 12 12 12 6 6 6 12 6 6 12
1.200[J] 1.266 15.071 15.093[J] 15.774 15.872 15.873 IDS.145[J] IDS.147[J] IDS.305[J] IDS.330[J] IDS.333[J] IDS.338[J] Management Elec	Transportation: Foundations and Methods Supply Chain and Demand Analytics The Analytics Edge Optimization Methods The Analytics of Operations Management Introduction to System Dynamics System Dynamics for Business and Policy Data Mining: Finding the Models and Policy Data Mining: Finding the Models and Predictions that Create Value Statistical Machine Learning and Data Science Business and Operations Analytics Real Options for Product and Systems Design Risk and Decision Analysis Multidisciplinary Design Optimization	12 6 12 12 12 6 6 9 6 12 6 6 12
1.200[J] 1.266 15.071 15.093[J] 15.774 15.871 15.872 15.873 IDS.145[J] IDS.145[J] IDS.305[J] IDS.305[J] IDS.338[J] IDS.338[J] IDS.338[J] IDS.338[J]	Transportation: Foundations and Methods Supply Chain and Demand Analytics The Analytics Edge Optimization Methods The Analytics of Operations Management Introduction to System Dynamics System Dynamics for Business and Policy Data Mining: Finding the Models and Policy Data Science Business and Operations Analytics Real Options for Product and Systems Design Risk and Decision Analysis Risk and Decision Analysis Multidisciplinary Design Optimization	12 6 12 12 12 6 6 6 12 6 6 12 12

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
15.784	Operations Laboratory	9
15.777	Healthcare Lab: Introduction to Healthcare Delivery in the United States	15
15.900	Competitive Strategy	9
15.904	Strategy and the CEO	6
15.915	Business Strategies for a Sustainable Future	9

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 receiv completion of t constitutes the	ve advanced standing credit for he MicroMasters Credential, which first semester of the program.	
SCM.500	Studies in Supply Chain Management	42
Students comp constituting the	lete the following subjects in residence, e second semester of the program.	
IAP Required S	ubjects	
SCM.258	Written Communication Topics for Supply Chain Management	1
SCM.262	Leading Global Teams	3
SCM.254	Analytical Methods for Supply Chain Management II	3
Spring Require	d Subjects	
SCM.263	Advanced Writing Workshop for SCM	3
SCM.281	Supply Chain Public Speaking Workshop	1

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	n
	Algorithms to Applications	
Capstone Requ	irement	
A capstone repo	ort, presentation, and executive	
summary of the	project are required.	
SCM.800	Capstone Project in Supply Chain Management	9
Required Electi	ves	
Select 1 elective	in each of the following categories,	16
plus additional	electives to meet unit requirement:	
Finance Elec	tives	
Supply Chair	1 Electives	
Analysis Elec	tives	
Total Units		90
Electives		
The subjects lis	ted below are recommended. Students	
may select othe	er subjects with the approval of the	
advisor.		
	es	
SCM.251	Supply Chain Financial Analysis	9
SCM.253	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	9
	Statements	
Supply Chain E	lectives	
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 Elective	S	
1.200[J]	Transportation: Foundations and Methods	12
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 Options for Product and Systems Design	6
IDS.333[J]	Risk and Decision Analysis	6
IDS.338[J]	Multidisciplinary Design Optimization	12
Management Ele	ctives	
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 Requ	lirements	
Students rece	eive advanced standing credit for	
completion o	f the MicroMasters Credential, which	
constitutes th	ne first semester of the program.	
SCM.500	Studies in Supply Chain Management	42
Students com constituting t	nplete the following subjects in residence, 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 Requi	red 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 Requi	rement	
A master's th	esis, presentation, and executive	
summary of t	he thesis are required.	
SCM.THG	Graduate Thesis	12
Required Elec	ctives	
Select 1 elect	ive in each of the following categories,	13
plus addition	al electives to meet unit requirement:	
Finance Ele	ectives	
Supply Cha	ain Electives	
Analysis El	lectives	
Total Units		90

Electives

The subjects list may select other advisor	ed below are recommended. Students r subjects with the approval of the	
Finance Elective	S	
SCM.251	Supply Chain Financial Analysis	Q
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 Ele	ectives	
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 Elective	25	
1.200[J]	Transportation: Foundations and Methods	12
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 Options for Product and Systems Design	6
IDS.333[J]	Risk and Decision Analysis	6
IDS.338[J]	Multidisciplinary Design Optimization	12
Management El	ectives	
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