MASTER OF SCIENCE IN TRANSPORTATION (MST)

Master of Science in Transportation Program Description (*http://catalog.mit.edu/interdisciplinary/graduate-programs/transportation*)

A Master of Science degree at MIT requires a minimum of 66 units of graduate subjects, plus a thesis. The subject and thesis requirements for this program are described below.

Subject Requirements

Core Subjects		
1.200[J]	Transportation Systems Analysis: Performance and Optimization	12
1.201[J]	Transportation Systems Analysis: Demand and Economics	12
Individually Designed Program		
Select three subjects from the MST Program Areas, listed separately below.		18-21
Select one subject from the Policy and Technology Subjects, listed separately below.		9-12
Computer Programming Requirement [1]		
1.001	Engineering Computation and Data Science [2]	12
Total Units		66

[1] *Requests to waive this requirement based on prior coursework must be submitted in writing to the Transportation Education Committee (TEC) executive director.*

[2] *Recommended for most students. See the MST website (http://cee.mit.edu/graduate/transportation/degreerequirements) for information about acceptable substitutions.*

Thesis Requirement

Students must complete a research-based thesis on a topic of their choice that has been approved by the thesis supervisor.

1.THG	Graduate Thesis	24

MST Program Areas

Select from the subjects below to fulfill the Individually Designed Program Requirement.

Air Transportation		
16.71[J]	The Airline Industry	12
16.72	Air Traffic Control	12
16.75[J]	Airline Management	12
16.763[J]	Air Transportation Operations Research	12
16.781[J]	Planning and Design of Airport Systems	12
16.886	Air Transportation Systems Architecting	12
Analysis and Planning Methods		
1.202	Demand Modeling	12
1.203[J]	Applied Probability and Stochastic Models	12
1.205	Advanced Demand Modeling	12
Data Sciences for Transportation		
1.204	Computer Modeling: From Human Mobility to Transportation Networks	12
6.268	Network Science and Models [1]	12
11.205	Introduction to Spatial Analysis	6
15.060	Data, Models, and Decisions	9
15.077[J]	Statistical Learning and Data Mining	12
Intelligent Transportation Systems, Safety, and Security		
1.208	Resilient Infrastructure Networks	12
16.412[J]	Cognitive Robotics [1]	12
16.413	Principles of Autonomy and Decision Making [1]	12
16.422	Human Supervisory Control of Automated Systems [1]	12
IDS.340[J]	System Safety Concepts	12
STS.487	Foundations of Information Policy	12
Logistics and Supply Chain Management		
1.203[J]	Applied Probability and Stochastic Models	12
1.260[J]	Logistics Systems	12
1.261[J]	Case Studies in Logistics and Supply Chain Management	9
1.265[J]	Global Supply Chain Management	6
SCM.266	Freight Transportation	6
Transportation Planning, Policy, and Sustainability		
1.253[J]	Transportation Policy, the Environment, and Livable Communities	12
2.65[J]	Sustainable Energy [1]	12
11.478	Behavior and Policy: Connections in Transportation [3]	12
11.527	Advanced Seminar in Transportation Finance	12
IDS.435	Law, Technology, and Public Policy	12
Urban Transportation [2]		

1.251[J]	Comparative Land Use and Transportation Planning [3]	12
1.252[J]	Urban Transportation Planning [3]	12
1.254	Transport Modeling Course	12
1.258[J]	Public Transportation Systems	12

1 *Also satisfies the Technology requirement.*

2 *Special subjects offered by the Department of Urban Studies and Planning (Course 11) may satisfy this requirement if content satisfies MST criteria. Contact program office for available offerings.*

3 *Also satisfies the Policy requirement.*

Policy and Technology Subjects

Select from the subjects below to satisfy the Policy / Technology Requirement.

Transportation Policy Subjects [1]		
1.252[J]	Urban Transportation Planning	12
1.253[J]	Transportation Policy, the Environment, and Livable Communities	12
11.478	Behavior and Policy: Connections in Transportation	12
Transportation Subjects with Substantial Policy Content		
11.526[J]	Comparative Land Use and Transportation Planning	12
16.71[J]	The Airline Industry	12
Policy Subjects with Modest or No Transportation Content		
11.255	Negotiation and Dispute Resolution in the Public Sector	12
11.481[J]	Analyzing and Accounting for Regional Economic Change	12
11.482[J]	Regional Socioeconomic Impact Analyses and Modeling	12
15.023[J]	Global Climate Change: Economics, Science, and Policy	9
IDS.412[J]	Science, Technology, and Public Policy	12
IDS.435	Law, Technology, and Public Policy	12
STS.487	Foundations of Information Policy	12
Technology Subjects		
2.65[J]	Sustainable Energy	12
6.268	Network Science and Models	12
16.422	Human Supervisory Control of Automated Systems	12
16.72	Air Traffic Control	12
MAS.552[J]	City Science	12
MAS.836	Sensor Technologies for Interactive Environments	12

1 *Special subjects offered by the Department of Urban Studies and Planning (Course 11) may satisfy this requirement if content satisfies MST criteria. Contact program office for available offerings.*