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 2
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/degerequirements) 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
16.781[J] Planning and Design of Airport Systems 12
16.886 Air Transportation Systems Architecting 12

Analysis and Planning Methods
1.202 Demand Modeling 12
1.205 Advanced Demand Modeling 12

Data Sciences for Transportation
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[J] Principles of Autonomy and Decision Making 1 12
16.422 Human Supervisory Control of Automated Systems 1 12

STS.487 Foundations of Information Policy 12

Logistics and Supply Chain Management
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
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[J] Law, Technology, and Public Policy 12

Urban Transportation 2
1.251[J] Comparative Land Use and Transportation Planning 3 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.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.478</td>
<td>Behavior and Policy: Connections in Transportation</td>
</tr>
</tbody>
</table>

**Transportation Policy Subjects**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.526[J]</td>
<td>Comparative Land Use and Transportation Planning</td>
</tr>
<tr>
<td>16.71[J]</td>
<td>The Airline Industry</td>
</tr>
</tbody>
</table>

**Transportation Subjects with Substantial Policy Content**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.255</td>
<td>Negotiation and Dispute Resolution in the Public Sector</td>
</tr>
<tr>
<td>11.481[J]</td>
<td>Analyzing and Accounting for Regional Economic Change</td>
</tr>
<tr>
<td>11.482[J]</td>
<td>Regional Socioeconomic Impact Analyses and Modeling</td>
</tr>
<tr>
<td>IDS.412[J]</td>
<td>Science, Technology, and Public Policy</td>
</tr>
<tr>
<td>IDS.435[J]</td>
<td>Law, Technology, and Public Policy</td>
</tr>
<tr>
<td>STS.487</td>
<td>Foundations of Information Policy</td>
</tr>
</tbody>
</table>

**Policy Subjects with Modest or No Transportation Content**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.65[J]</td>
<td>Sustainable Energy</td>
</tr>
<tr>
<td>6.268</td>
<td>Network Science and Models</td>
</tr>
<tr>
<td>16.422</td>
<td>Human Supervisory Control of Automated Systems</td>
</tr>
<tr>
<td>16.72</td>
<td>Air Traffic Control</td>
</tr>
<tr>
<td>MAS.552[J]</td>
<td>City Science</td>
</tr>
<tr>
<td>MAS.836</td>
<td>Sensor Technologies for Interactive Environments</td>
</tr>
</tbody>
</table>

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.