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

The Master of Science in Transportation (MST) program is based on the premise that a common set of analytical approaches and methodologies can be applied to solve a range of transportation problems. The MST provides a common basis for addressing a wide range of problems while allowing enough flexibility to accommodate students with diverse backgrounds and interests.

Students must complete a program of coursework, plus a research-based master's thesis on a topic of their choosing approved by their thesis supervisor. Coursework includes three required core subjects; one policy, technology, and society subject; a computing/analytics subject; and at least one additional transportation or related subject, all comprising an individually designed program.

Common areas of specialization include systems and optimization (freight and logistics; vehicles and energy; networks and systems; public transport; emerging mobility; and air transport), analytics and computation (big data; automation and AI; behavior and demand modeling; and operations research and statistics), and planning, policy, and institutions (sustainability and the environment; economics and finance; and urban planning, design, and policy). Some students use the individually designed program to deepen their understanding of a selected area of interest, while others may choose to emphasize breadth rather than depth in their studies.

The MST degree usually takes up to two years to complete.

For more information, see the Master of Science in Transportation program description (https://cee.mit.edu/interdepartmental-program-in-transportation).

Core Subjects

11.251 Frontier of Transportation Research 3

Select one of the following: 12
1.202 Demand Modeling
1.208 Resilient Networks
1.260[J] Logistics Systems
11.478 Behavioral Science and Urban Mobility

Computation/Analytics

Select one of the following: 12
6.3732[J] Statistics, Computation and Applications
6.7900 Machine Learning
6.7910[J] Statistical Learning Theory and Applications
6.851 Modeling with Machine Learning: from Algorithms to Applications 1
15.071 The Analytics Edge
15.072 Advanced Analytics Edge

Policy, Technology, and Society

Select one subject from the list below. 6-12

Transportation Subject Electives

Select a minimum of 24 units of transportation related electives in consultation with advisor. 24

Thesis

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

1.THG Graduate Thesis 24

Total Units 93-99

1 Credit cannot be earned unless 6.C51 and 1.C51 are completed at the same time.
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 Requests to waive this requirement based on prior coursework must be submitted in writing to the Transportation Education Committee (TEC) executive director.

Policy, Technology, and Society Subjects

2.65[J] Sustainable Energy 12
2.810 Manufacturing Processes and Systems 12
6.7260 Network Science and Models 12
11.255 Negotiation and Dispute Resolution in the Public Sector 12
11.478 Behavioral Science and Urban Mobility 12
11.526[J] Comparative Land Use and Transportation Planning 12
11.540 Urban Transportation Planning and Policy 12
15.020 Economics of Energy, Innovation, and Sustainability 12
15.230 Public Policy and the Private Sector 9
15.655[J] Law, Technology, and Public Policy 12
16.422 Human Supervisory Control of Automated Systems 12
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tr>
<td>16.71</td>
<td>The Airline Industry</td>
<td>12</td>
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<tr>
<td>16.72</td>
<td>Air Traffic Control</td>
<td>12</td>
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<tr>
<td>16.89</td>
<td>Space Systems Engineering</td>
<td>12</td>
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<td>MAS.552</td>
<td>City Science</td>
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<td>MAS.750</td>
<td>Human-Robot Interaction</td>
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<td>MAS.836</td>
<td>Sensor Technologies for Interactive Environments</td>
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<td>MAS.859</td>
<td>Space Technology for the Development Leader</td>
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<td>IDS.333</td>
<td>Risk and Decision Analysis</td>
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<td>IDS.410</td>
<td>Modeling and Assessment for Policy</td>
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<td>Concepts and Research in Technology and Policy</td>
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<td>Science, Technology, and Public Policy</td>
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<td>Energy Systems for Climate Change Mitigation</td>
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<td>Mapping and Evaluating New Energy Technologies</td>
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<td>Sustainability Science and Engineering</td>
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<td>STS.477</td>
<td>Writing: Science, Technology, and Society</td>
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<td>STS.487</td>
<td>Foundations of Information Policy</td>
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