

MASTER OF ENGINEERING IN CIVIL AND ENVIRONMENTAL ENGINEERING

Department of Civil and Environmental Engineering (<https://catalog.mit.edu/schools/engineering/civil-environmental-engineering/#master-science-civil-engineering>)

Climate, Environment, and Sustainability Track Requirements

Select three of the following core subjects: 36

1.65	Atmospheric Boundary Layer Flows and Wind Energy	
1.670[J]	Energy Systems for Climate Change Mitigation	
1.771	Global Change Science	
1.800	Chemicals in the Environment	
1.811[J]	Environmental Law, Policy, and Economics: Pollution Prevention and Control	
1.845	Introduction to the Terrestrial Carbon Cycle and Ecosystem Ecology	
1.861	Physics and Engineering of Renewable Energy Systems	
1.C51	Machine Learning for Sustainable Systems	
6.C51 & 1.C51	Modeling with Machine Learning: from Algorithms to Applications and Machine Learning for Sustainable Systems	

Restricted Elective 12

Select one 12-unit Civil and Environmental Engineering subject

Unrestricted Electives 18

Thesis

1.THG Graduate Thesis 24

Total Units 90

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Data Science for Engineering Systems Track Requirements

1.577 Data-Centric Engineering Studio 12

Select at least 18 units from the following subjects: 18

1.121[J]	Advancing Mechanics and Materials via Machine Learning	
1.125	Architecting and Engineering Software Systems	
1.275[J]	Business and Operations Analytics	

6.C51 & 1.C51 Modeling with Machine Learning: from Algorithms to Applications and Machine Learning for Sustainable Systems

IDS.131[J] Statistics, Computation and Applications

Concentration 24

Select 24 units from either the Computational Modeling and Design for Sustainability concentration or the Resilient Infrastructure Systems and Services concentration:

Computational Modeling and Design for Sustainability

1.147	Startup Sustainable Tech	
1.545[J]	Atomistic Modeling and Simulation of Materials and Structures	
1.579	Materials in Agriculture, Food Security, and Food Safety	
1.61	Transport Processes in the Environment	
1.631[J]	Fluids and Diseases	
1.65	Atmospheric Boundary Layer Flows and Wind Energy	
1.723	Computational Methods for Flow in Porous Media	

Resilient Infrastructure Systems and Services

1.200[J]	Transportation: Foundations and Methods	
1.202	Demand Modeling	
1.208	Resilient Networks	
1.260[J]	Logistics Systems	
1.263[J]	Urban Last-Mile Logistics	
1.266	Supply Chain and Demand Analytics	
1.303[J]	Infrastructure Design for Climate Change	
1.581[J]	Structural Dynamics	
1.583[J]	Topology Optimization of Structures	

Unrestricted Electives 12

Thesis

1.THG Graduate Thesis 24

Total Units 90

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Structural Mechanics and Design Track Requirements

1.562 Structural Design Project I 12

1.563 Structural Design Project II 12

Restricted Electives 24

Choose 24 units of Civil and Environmental
Engineering subjects

Unrestricted Electives		18
Thesis		
1.THG	Graduate Thesis	24
Total Units		90