

Subjects for Studying Sustainability at MIT, with electives that currently count for the Environment and Sustainability Minor noted

This listing includes classes with content for learning about a future that is both environmentally and socially sustainable. Additional subjects that primarily focus on the environment are also included (e.g. those covering the topics of climate, sustainable energy, and ecology).

Subjects were selected from the full inventory of subjects offered at MIT as of August 2016. Cross-listed or jointly offered ([J]) subjects marked with an astrich (*) are not administered by the department indicated in the subject number. Please contact the Environmental Solutions Initiative for details on the selection criteria for this list, or to report omissions.

Additional subjects may be counted toward the Minor elective requirement in consultation with the Environmental Solutions Initiative (esi@mit.edu).

Edited December 2017

School/ Department	Subject #	Subject Title	Subjects that count as electives for the Environment and Sustainability Minor are noted here, along with the content pillar they fulfill (required Core classes are also noted)	Undergraduate subject	Graduate subject	Credit units	Time offered
School of Architecture & Planning							
Architecture							
	4.153	Architecture Design Core Studio III			Y	21	Fall
	4.211[J]*	The Once and Future City	<i>Environmental Histories & Cultures</i>	Y		12	Spring
	4.214	Water, Landscape & Urban Design			Y	12	Spring
	4.217	Disaster Resilient Design			Y	9	Spring
	4.227	Landscapes of Energy			Y	12	Fall
	4.251	The Making of Cities		Y		12	Spring
	4.401	Environmental Technologies in Buildings	<i>Engineering for Sustainability</i>	Y		12	Fall
	4.411[J]	D-Lab Schools: Building Technology Laboratory	<i>Engineering for Sustainability</i>	Y		12	Fall
	4.42[J]	Fundamentals of Energy in Buildings	<i>Engineering for Sustainability</i>	Y		12	Fall
	4.430	Daylighting & Solar Gain Control			Y	9 or 12 units	Spring
	4.432	Modeling Urban Energy Flows for Sustainable Cities and Neighborhoods	<i>Engineering for Sustainability</i>	Y		12	Spring
	4.473	Design Workshop for a Sustainable Future			Y	9	Spring
	4.612	Islamic Architecture & the Environment			Y	9	2017-2018: Not offered
	4.622	Islamic Gardens and Geographies	<i>Environmental Histories & Cultures</i>	Y		12	Spring
	4.625	Water Planning, Policy & Design			Y	Units arranged	Fall
Urban Studies & Planning							
	11.004[J]	People and the Planet: Environmental Histories and Engineering	<i>***** Core Subject *****</i>	Y		12	Spring
	11.016[J]	The Once and Future City	<i>Environmental Histories & Cultures</i>	Y		12	Spring
	11.021[J]*	Environmental Law, Policy, and Economics: Pollution Prevention and Control	<i>Environmental Governance</i>	Y		12	Fall
	11.022[J]*	Regulation of Chemicals, Radiation, and Biotechnology	<i>Environmental Governance</i>	Y		12	Spring
	11.025[J]*	D-Lab: Development	<i>Environmental Governance Environmental Histories & Cultures Engineering for Sustainability</i>	Y		12	Fall
	11.123	Big Plans and Mega-Urban Landscapes	<i>Environmental Governance</i>	Y		9	Spring
	11.140	Urbanization and Development		Y		12	Spring
	11.142	Geography of the Global Economy	<i>Environmental Governance</i>	Y		12	Spring
	11.148	Environmental Justice: Law and Policy	<i>Environmental Governance</i>	Y		12	Fall
	11.162	Politics of Energy and the Environment	<i>Environmental Governance</i>	Y		12	Spring
	11.165	Urban Energy Systems & Policy		Y		12	Fall
	11.166	Law, Social Movements & Public Policy: Comparative & International Experience		Y		12	Spring
	11.260	Sustainable Development and Institutions			Y	12	Fall
	11.308	Ecological Urbanism Seminar			Y	12	Fall
	11.364	International Environmental Treaties & their Implementation			Y	9	Fall
	11.376	Urban Sustainability in Action			Y	12	Spring
	11.377	Food Systems & Environment			Y	12	Fall
	11.380	Urban Climate Adaptation			Y	12	Spring
	11.382	Water Diplomacy: the Science, Policy, & Politics of Managing Shared Resources			Y	12	Spring
	11.384	Preparation for Malaysia Sustainable Cities Fieldwork			Y	3	Fall; partial term

11.385	Malaysia Sustainable Cities Fieldwork		Y	6	IAP
11.386	Malaysia Sustainable Cities Practicum		Y	3	Spring; partial term
11.404	Housing Policy & Planning in the US & Abroad		Y	12	Spring
11.436	Housing Studio: Neighborhood Sustainability Plan		Y	15	Spring
11.533	Ecological Planning with GIS		Y	12	Spring
11.601	Intro to Environmental Policy & Planning		Y	12	Fall
11.630[J]*	Environmental Law, Policy, & Economics: Pollution Prevention and Control		Y	12	Fall
School of Engineering					
Civil & Environmental Engineering					
1.007	Big Engineering: Small Solutions with a Large Impact	<i>Engineering for Sustainability</i>	Y	6	Fall
1.011	Project Evaluation and Management	<i>Engineering for Sustainability</i>	Y	12	Spring
1.013	Senior Civil & Environmental Engineering Design Project		Y	12	Spring
1.016[J]	Design for Complex Environmental Issues: Building Solutions and Communicating Ideas	<i>Environmental Histories & Cultures</i> <i>Engineering for Sustainability</i>	Y	9	Spring
1.018A[J]	Fundamentals of Ecology I	<i>Earth Systems & Climate Science</i>	Y	6	Fall
& 1.018B[J]	and Fundamentals of Ecology II	<i>Earth Systems & Climate Science</i>	Y	6	
1.020	Principles of Energy & Water Sustainability		Y	12	Spring
1.035	Multiscale Characterization of Materials		Y	12	Spring
1.044[J]*	Fundamentals of Energy in Buildings	<i>Engineering for Sustainability</i>	Y	12	Fall
1.071	Global Change Science		Y	12	Fall
1.075	Water Resource Systems		Y	12	Fall
1.078	Introduction to Soil Science	<i>Earth Systems & Climate Science</i>	Y	12	Fall
1.080A	Environmental Chemistry I	<i>Earth Systems & Climate Science</i>	Y	6	Spring
& 1.080B	and Environmental Chemistry II	<i>Earth Systems & Climate Science</i>	Y	6	
1.084[J]*	Systems Microbiology	<i>Earth Systems & Climate Science</i>	Y	12	Fall
1.085	Air Pollution		Y	12	Fall
1.089	Environmental Microbiology	<i>Earth Systems & Climate Science</i>	Y	12	Spring
or 1.089A	Environmental Microbiology I	<i>Earth Systems & Climate Science</i>	Y	6	Spring; first half of term
1.091	Traveling Research Environmental Experience: Fieldwork		Y	3	IAP
1.092	Traveling Research Environmental Experience: Fieldwork Analysis & Communication		Y	9	Spring
1.102	Introduction to Civil & Environmental Engineering Design II		Y	6	Spring
1.107	Environmental Chemistry & Biology Lab		Y	6	Spring
1.153	Transportation Policy, the Environment, & Livable Communities		Y	12	Spring
1.252	Urban Transportation Planning		Y	12	Fall
1.74	Land, Water, Food, & Climate		Y	6	Spring
1.801[J]	Environmental Law, Policy, and Economics: Pollution Prevention and Control	<i>Environmental Governance</i>	Y	12	Fall
1.802[J]	Regulation of Chemicals, Radiation, and Biotechnology	<i>Environmental Governance</i>	Y	12	Spring
1.811[J]	Environmental Law, Policy, & Economics: Pollution Prevention and Control		Y	12	Fall
1.819	Design for Sustainability		Y	6	Fall
1.83	Environmental Organic Chemistry		Y	12	Fall
1.84	Atmospheric Chemistry		Y	12	Fall
1.841	Atmospheric Composition in the Changing Earth System		Y	12	Spring
1.851	Water, Sanitation, Hygiene & Environmental Sanitation in Low- and Middle-income Countries		Y	Units arranged	Spring
Mechanical Engineering					
2.00A	Fundamentals of Engineering Design: Explore Space, Sea and Earth	<i>Engineering for Sustainability</i>	Y	9	Spring
2.00C[J]*	Design for Complex Environmental Issues: Building Solutions and Communicating Ideas	<i>Environmental Histories & Cultures</i> <i>Engineering for Sustainability</i>	Y	9	Spring
2.500	Desalination & Water Purification		Y	12	Spring
2.60	Fundamentals of Advanced Energy Conversion		Y	12	Spring
2.627	Fundamentals of Photovoltaics	<i>Engineering for Sustainability</i>	Y	12	Fall

	2.651[J]*	D-Lab: Energy	<i>Environmental Governance Engineering for Sustainability</i>	Y		12	Spring
	2.66[J]*	Fundamentals of Energy in Buildings	<i>Engineering for Sustainability</i>	Y		12	Fall
	2.813	Energy, Materials, & Manufacturing		Y		12	Spring
	2.981	New England Coastal Ecology	<i>Earth Systems & Climate Science</i>	Y		3	IAP
Materials Science & Engineering							
	3.081	Industrial Ecology of Materials		Y		12	Fall
	3.094	Materials in Human Experience	<i>Environmental Histories & Cultures Engineering for Sustainability</i>	Y		9	Spring
	3.18	Materials Science & Engineering of Clean Energy		Y		12	Spring
	3.19	Sustainable Chemical Metallurgy		Y		12	Spring
	3.982	The Ancient Andean World	<i>Environmental Histories & Cultures Earth Systems & Climate Science</i>	Y		9	Fall
	3.983	Ancient Mesoamerican Civilization	<i>Environmental Histories & Cultures Engineering for Sustainability</i>	Y		9	Spring
Chemical Engineering							
	10.04	A Philosophical History of Energy	<i>Environmental Histories & Cultures</i>	Y		12	Spring
	10.05	Foundational Analyses of Problems in Energy and the Environment	<i>Environmental Histories & Cultures</i>	Y		12	Spring
	10.489	Concepts in Modern Heterogeneous Catalysis		Y		9	Spring
Biological Engineering							
	20.106[J]	Systems Microbiology	<i>Earth Systems & Climate Science</i>	Y		12	Fall
Nuclear Science & Engineering							
	22.033	Nuclear Systems Design Project	<i>Engineering for Sustainability</i>	Y		15	Fall
	22.04[J]	Social Problems of Nuclear Energy	<i>Engineering for Sustainability</i>	Y		12	Fall
	22.081[J]	Introduction to Sustainable Energy	<i>Engineering for Sustainability</i>	Y		12	Fall
School of Humanities, Arts, & Social Sciences							
Economics							
	14.42	Environmental Policy & Economics		Y		12	Spring
	14.444	Energy Economics & Policy			Y	12	Spring
Political Science							
	17.051	Ethics of Energy Policy	<i>Environmental Histories & Cultures</i>	Y		12	Fall
	17.181	Sustainability: Political Economy, Science, and Policy	<i>Environmental Governance</i>	Y		12	Fall
	17.309[J]	Science, Technology, and Public Policy	<i>Environmental Governance</i>	Y		12	Fall
	17.310[J]	Science, Technology, and Public Policy			Y	12	Fall
	17.393[J]*	Environmental Law, Policy, and Economics: Pollution Prevention and Control	<i>Environmental Governance</i>	Y		12	Fall
	17.395[J]*	Introduction to Sustainable Energy	<i>Engineering for Sustainability</i>	Y		12	Fall
	17.411	Globalization, Migration, and International Relations	<i>Environmental Governance</i>	Y		12	Spring
Anthropology							
	21A.155	Food, Culture, and Politics	<i>Environmental Histories & Cultures</i>	Y		12	Spring
	21A.303[J]	The Anthropology of Biology	<i>Environmental Histories & Cultures</i>	Y		12	Fall
	21A.410	Environmental Struggles	<i>Environmental Governance</i>	Y		12	Spring
	21A.411[J]*	People and Other Animals	<i>Environmental Histories & Cultures</i>	Y		12	N/A
	21A.429	Environmental Conflict & Social Change			Y	12	2017-2018: Not offered
Global Studies & Languages							
	21G.057	Gender in Science, Technology, & the Environment		Y		12	Spring
	21G.417	Cultural Geographies of Germany: Nature, Culture, & Politics		Y		12	Spring
History							
	21H.185[J]	Environment & History		Y		12	Spring
	21H.380[J]	People and Other Animals	<i>Environmental Histories & Cultures</i>	Y		12	N/A
	21H.383	Technology & the Global Economy, 1000-2000		Y		12	Fall
	21H.981	Seminar in Nature, Environment, & Empire			Y	12	Spring

Literature						
21L.449	The Wilds of Literature	<i>Environmental Histories & Cultures</i>	Y		12	Spring
Writing						
21W.012	Writing & Rhetoric: Food for Thought		Y		12	Fall
21W.036	Science Writing & New Media: Writing & the Environment		Y		12	Fall
21W.775	Writing about Nature & Environmental Issues		Y		12	Spring
Linguistics and Philosophy						
24.03	Good Food: The Ethics and Politics of Food	<i>Environmental Histories & Cultures</i>	Y		12	Spring
Science, Technology, & Society						
STS.009	Evolution and Society	<i>Environmental Histories & Cultures</i>	Y		12	2017-2018: Not offered
STS.032	Energy, Environment, and Society	<i>Environmental Histories & Cultures</i>	Y		12	Spring
STS.033[J]*	People and the Planet: Environmental Histories and Engineering	***** Core Subject *****	Y		12	Spring
STS.060[J]*	The Anthropology of Biology	<i>Environmental Histories & Cultures</i>	Y		12	Fall
STS.082[J]*	Science, Technology, and Public Policy	<i>Environmental Governance</i>	Y		12	Fall
STS.084[J]*	Social Problems of Nuclear Energy	<i>Engineering for Sustainability</i>	Y		12	Fall
STS.088	Africa for Engineers		Y		12	2017-2018: Not offered
STS.482[J]*	Science, Technology, and Public Policy			Y	12	Fall
School of Science						
Chemistry						
5.00	Energy Technology & Policy: From Principles to Practice			Y	9	Spring
5.37	Organic & Inorganic Laboratory		Y		Units arranged	Fall, Spring
Biology						
7.30A[J]*	Fundamentals of Ecology I	<i>Earth Systems & Climate Science</i>	Y		6	Fall
& 7.30B[J]*	and Fundamentals of Ecology II	<i>Earth Systems & Climate Science</i>	Y		6	
Physics						
8.21	Physics of Energy	<i>Earth Systems & Climate Science</i>	Y		12	Spring
Earth, Atmospheric, & Planetary Sciences						
12	Solving Complex Problems	<i>Earth Systems & Climate Science</i> <i>Engineering for Sustainability</i>	Y		9	Fall
12.001	Introduction to Geology	<i>Earth Systems & Climate Science</i>	Y		12	Fall
12.002	Introduction to Geophysics and Planetary Science	<i>Earth Systems & Climate Science</i>	Y		12	Spring
12.003	Introduction to Atmosphere, Ocean, and Climate Dynamics	<i>Earth Systems & Climate Science</i>	Y		12	Fall
12.007	Geobiology: History of Life on Earth	<i>Earth Systems & Climate Science</i>	Y		12	Spring
12.009	Nonlinear Dynamics: The Natural Environment		Y		12	Spring
12.021	Earth Science, Energy, and the Environment	<i>Earth Systems & Climate Science</i>	Y		12	Fall
12.031A[J]*	Fundamentals of Ecology I	<i>Earth Systems & Climate Science</i>	Y		6	Fall
& 12.031B[J]*	and Fundamentals of Ecology II	<i>Earth Systems & Climate Science</i>	Y		6	
12.086	Modeling Environmental Complexity		Y		12	Fall
12.102	Environmental Earth Science	<i>Earth Systems & Climate Science</i>	Y		12	Fall
12.104	Geochemistry of the Earth and Planets	<i>Earth Systems & Climate Science</i>	Y		12	Fall
12.12	Environmental Earth Science Field Course	<i>Earth Systems & Climate Science</i>	Y		6	IAP
12.17	Essentials of Geology	<i>Earth Systems & Climate Science</i>	Y		12	Fall
12.174	Biogeochemistry of Natural and Perturbed Systems	<i>Earth Systems & Climate Science</i>	Y		12	Spring
12.213	Alternate Energy Sources	<i>Engineering for Sustainability</i>	Y		6	IAP
12.301	Climate Science		Y		12	Fall
12.306	Atmospheric Physics & Chemistry		Y		12	Spring
12.307	Weather and Climate Laboratory	<i>Earth Systems & Climate Science</i>	Y		15	Spring
12.335	Experimental Atmospheric Chemistry	<i>Earth Systems & Climate Science</i>	Y		12	Fall
12.340	Global Warming Science		Y		12	Spring
12.346[J]*	Global Environmental Negotiations	<i>Environmental Governance</i>	Y		6	Fall

12.349	Mechanisms and Models of the Global Carbon Cycle	<i>Earth Systems & Climate Science</i>	Y		12	Spring
12.372	Elements of Modern Oceanography		Y		12	Fall
12.385	Science, Politics, and Environmental Policy	<i>Earth Systems & Climate Science Environmental Governance</i>	Y		9	Fall
12.386[J]*	Environment & History		Y		12	Spring
12.387[J]	People and the Planet: Environmental Governance and Science	<i>***** Core Subject *****</i>	Y		9	Fall
12.39	Fluid Dynamics of the Atmosphere and Ocean		Y		12	Fall
12.707	The History of Earth's Climate			Y	12	2017-2018: Not offered
12.740	Paleoceanography			Y	12	Spring
12.860	Climate Variability & Diagnostics			Y	12	Spring
Sloan School of Management						
Management						
15.014	Applied Macro- & International Economics II			Y	6	Spring; second half of term
15.026	Global Climate Change: Economics, Science, & Policy		Y		9	Spring
15.031	Energy Decisions, Markets & Policies		Y		12	Fall
15.569	Leadership Lab: Leading Sustainable Systems			Y	15	Fall, IAP
15.663[J]*	Environmental Law, Policy, & Economics: Pollution Prevention and Control			Y	12	Fall
15.723	Advanced Applied Macroeconomics & International Institutions			Y	6	IAP, Spring
15.772[J]*	D-Lab: Supply Chains	<i>Environmental Governance Engineering for Sustainability</i>	Y		12	Fall
15.874[J]*	People and the Planet: Environmental Governance and Science	<i>***** Core Subject *****</i>	Y		9	Fall
15.878	Capstone Seminar in Sustainability			Y	6	Spring; second half of term
15.913	Strategies for Sustainable Business			Y	6	Spring; first half of term
15.915	Laboratory for Sustainable Business			Y	6	Spring
15.933	Strategic Opportunities in Energy			Y	6	Fall; first half of term
Other Programs						
Edgerton Center						
EC.701[J]	D-Lab: Development	<i>Environmental Governance Environmental Histories & Cultures Engineering for Sustainability</i>	Y		12	Fall
EC.711[J]	D-Lab: Energy	<i>Environmental Governance Engineering for Sustainability</i>	Y		12	Spring
EC.713[J]*	D-Lab Schools: Building Technology Laboratory	<i>Engineering for Sustainability</i>	Y		12	Fall
EC.714	D-Lab: Earth	<i>Environmental Governance Earth Systems & Climate Science Engineering for Sustainability</i>	Y		6	Spring
EC.715	D-Lab: Water, Sanitation, Hygiene and Environmental Innovations for the Common Good	<i>Environmental Governance Environmental Histories & Cultures Engineering for Sustainability</i>	Y		9	Fall
EC.716	D-Lab: Waste	<i>Environmental Governance Engineering for Sustainability</i>	Y		9	Fall
EC.733[J]	D-Lab: Supply Chains	<i>Environmental Governance Engineering for Sustainability</i>	Y		12	Fall
EC.746[J]*	Design for Complex Environmental Issues: Building Solutions and Communicating Ideas	<i>Environmental Histories & Cultures Engineering for Sustainability</i>	Y		9	Spring

Institute for Data, Systems, & Society						
IDS.055[J]*	Science, Technology, and Public Policy	<i>Environmental Governance</i>	Y		12	Fall
IDS.060[J]*	Environmental Law, Policy, and Economics: Pollution Prevention and Control	<i>Environmental Governance</i>	Y		12	Fall
IDS.061[J]*	Regulation of Chemicals, Radiation, and Biotechnology	<i>Environmental Governance</i>	Y		12	Spring
IDS.062[J]	Global Environmental Negotiations	<i>Environmental Governance</i>	Y		6	Fall
IDS.063[J]*	People and the Planet: Environmental Governance and Science	<i>***** Core Subject *****</i>	Y		9	Fall
IDS.412[J]*	Science, Technology, and Public Policy			Y	12	Fall
IDS.437	Technology, Globalization, & Sustainable Development			Y	12	Fall
IDS.505	Engineering, Economics & Regulation of the Electric Power Sector			Y	12	Spring
IDS.521	Energy Systems & Climate Change Mitigation			Y	12	Spring
IDS.522	Mapping & Evaluating New Energy Technologies			Y	12	Fall
IDS.526	Sustainability Science & Engineering			Y	9	Fall
IDS.540[J]*	Environmental Law, Policy, & Economics: Pollution Prevention and Control			Y	12	Fall
Special Programs						
SP.360	Terrascope Radio	<i>Environmental Histories & Cultures</i>	Y		12	Spring