

Master in Urban Planning Transportation and Infrastructure Concentration 2023-2024

Advisors: Ann Forsyth and Carole Voulgaris Email: <u>aforsyth@gsd.harvard.edu</u> and <u>cvoulgaris@gsd.harvard.edu</u> Other Concentration Faculty: Diane Davis, Lourdes German

This area of concentration covers any form of infrastructure that is an important shaper of the built environment, particularly transportation, storm water, drinking water and sewage but also energy and telecommunications. Students are encouraged to take courses that examine infrastructure from a variety of perspectives, including:

- 1. Planning practice and policy
- 2. Analytic methods applied to infrastructure planning and operations
- 3. The physical design of infrastructure
- 4. The relationship between infrastructure and land use
- 5. Private infrastructure provision, regulation and finance
- 6. Specialized courses on modes of transportation or types of infrastructure

Please be aware that course offerings are subject to change. New courses may be introduced, while some of the approved courses listed here may not be available every year. This memo is subject to revisions based on course availability. Courses that are not mentioned in this memo do not automatically have approval and may only be approved after a review and written permission from the Concentration Advisor(s).

Recommended introductory courses:

The following courses are recommended to those interested in the concentration. They are introductory level courses that give a good overview of the topics and subject matter covered in more depth by other courses in the concentration:

SCHOOL	COURSE NUMBER	COURSE TITLE	UNITS	FACULTY
GSD	5437	Transportation Economics and Finance ¹ (Fall)	4	Voulgaris

1. Only if not taken to satisfy Economic Methods Requirement.

FALL 2023 APPROVED COURSES:

SCHOOL	COURSE	COURSE TITLE	UNITS	FACULTY
	NUMBER			
GSD	3241	Theories of Landscape as Urbanism	4	Waldheim
GSD	4362	Structuring Urban Experience: From the Athenian Acropolis	4	Smith
		to the Boston Common		
GSD	5437	Transportation Economics and Finance ¹	4	Voulgaris
GSD	6381	Power Energy: Mapping the Thickened Ground of Labor	4	Monacella
GSD	6482	Confronting Climate Change: A Foundation in Science,	4	Schrag
		Technology, and Policy		
HKS	API 141	Finance ²	4	Deep
HKS	MLD 411	Introduction to Budgeting and Financial Management (Fall 2)	2	Blimes,
				lammartino
MIT	1.200	Transportation: Foundations and Methods ³	4	Wu
	11.544			
MIT	1.232	The Airline Industry	4	Allroggen

	15.054			
	16.71			
MIT	1.263	Urban Last-Mile Logistics ⁴	2	Winkenbach
	11.263	Ŭ		
	SCM.293			
MIT	1.303	Infrastructure Design for Climate Change ⁵	2	Einstein
	11.273	5 5		
MIT	1.818	Sustainable Energy ⁵	4	Golay
	2.65			
	10.391			
	11.371			
MIT	11.478	Behavioral Science, Artificial Intelligence and Urban Mobility ⁵	4	Zhao
MIT	11.529	Mobility Ventures: Driving Innovation in Transportation	4	Zhao,
	15.379	Systems		Moavenzadeh,
				Aulet
MIT	11.540	Urban Transportation Planning	4	Aloisi

1. Only if not taken to satisfy Economic Methods Requirement.

2. Priority enrollment is given to HKS students and may not be available to GSD students.

3. Prerequisite: <u>1.000</u>, (<u>1.00</u> and <u>1.010</u>), or permission of instructor

4. Prerequisite: <u>SCM.254</u> or permission of instructor

5. Prerequisite: Enrollment requires permission of instructor.

SPRING 2024 APPROVED COURSES:

SCHOOL	COURSE	COURSE TITLE	UNITS	FACULTY
	NUMBER			
GSD	4374	Cities, Infrastructures, and Politics: From Renaissance to	4	Picon
		Smart Technologies		
GSD	5463	Planning for Pedestrians and Cyclists	4	Voulgaris
FAS	AFRAMER	Mobility, Power and Politics ¹	4	Agbiboa
	130Y			
FAS	ECON 1661	Economics of Climate Change and Environmental Policy	4	Stavins
		(Jointly offered by HKS)		
HKS	API 135	Economics of Climate Change and Environmental Policy	4	Stavins
		(Jointly offered by FAS)		
HKS	DEV 209	Management, Finance, and the Regulation of Public	4	Lee
		Infrastructure in Developing Countries		
HKS	MLD 605	Supply Chain Management for Public Service Delivery	2	Fagan
		(Spring 2)		
HKS	MLD 620M	The Data Smart City: Driving Innovation with Technology	2	Goldsmith
		(Spring 2) ²		
MIT	1.C01	Machine Learning for Sustainable Systems ³	2	Amin
MIT	1.286	Urban Energy Systems and Policy ¹	4	Hsu
	11.477			

1. Enrollment requires permission of instructor.

2. Priority enrollment is given to HKS students and may not be available to GSD students.

3. Prerequisite: (1.000 and 1.010) or permission of instructor; Co-requisite: 6.C01



APPROVED BUT NOT OFFRED IN 2023-2024:

For the below courses to be approved for the current academic year, they must be offered with the same course number, title, and instructor. The course must be reapproved if doesn't match the below version of the course.

SCHOOL	COURSE NUMBER	COURSE TITLE	FACULTY	
GSD	5380	Experimental Infrastructures	Spinak	
GSD	5394	Travel Behavior Forecasting	Voulgaris	
GSD	6277	Survey of Energy Technology (at SEAS)	Aziz	
HKS	API 148	Advanced Risk Management and Infrastructure Finance	Deep	
HKS	IGA 410	Energy Policy: Technologies, Systems, and Markets	Lee	
HKS	IGA 411	The Energy-Climate Challenge	Lee, Holdren	
HKS	IGA 565	Analytical Methods for Complex Adaptive Systems	Siddiqi	
HKS	MLD 410	State and Local Financial Policy	Chodos	
HLS	2040	Autonomous Vehicles and the Law*	Weinstock	
HLS	2227	Autonomous Vehicles and Local Government Lab	Crawford	
HLS	2813	City Use of Technology	Crawford	
HSPH	ID 539	Built Environment, Human Transportation, Public Health,	Lusk	
		and Climate Change		
MIT	1.205	Advanced Demand Modeling	Ben-Akiva	
MIT	11.254	Transport Modeling Course	Murga	
MIT	11.258	Public Transportation Systems	Wilson, Atanucci,	
			Koutsopoulous	
MIT	11.260	Logistics Systems	Sheffi, Caplice	
MIT	11.324	Modeling Pedestrian Activity in Cities	Sevtsuk	
MIT	11.371	Environmental Law, Policy, and Economics: Pollution,	Ashford, Hansman,	
		Prevention and Control	Kochan	
MIT	11.381	Infrastructure Systems in Theory and Practice	Hsu	
MIT	11.149	Decarbonizing Urban Mobility	Salzberg	
	11.449			
MIT	11.478	Behavior and Policy: Connections in Transportation	Zhao	
MIT	11.479	Water and Sanitation Infrastructure in Developing Countries	Murcott	
MIT	11.545	Transportation Systems Analysis: Demand and Economics	Ben-Akiva	
MIT	11.526	Comparative Land Use and Transportation Planning	Rosenblum	
MIT	11.543	Transportation Policy, the Environment, and Livable	ТВА	
		Communities		
MIT	11.544	Transportation Systems Analysis: Performance and	Wu	
		Optimization		
MIT	11.S941	Global Aging: Planning Cities for a 100-Year Society	Coughlin	