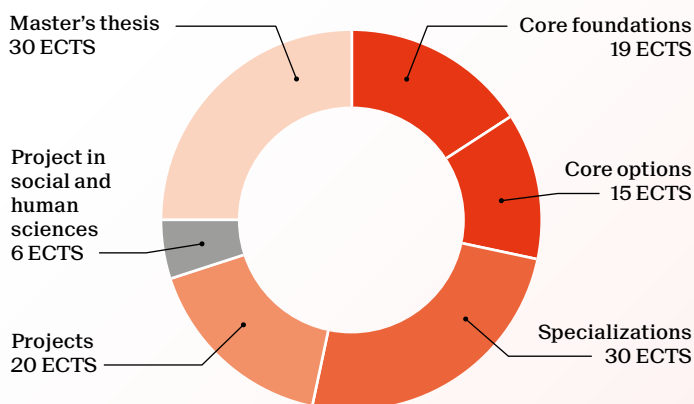


Master of Science in URBAN SYSTEMS

2-year program - 120 ECTS



The program includes a compulsory 8-week internship which can be extended to 6 months and combined with the Master's thesis.

Students must choose a 30 ECTS specialization in:

- A Mobility and transportation in a changing climate
- B Sustainable transitions in urban systems
- C Health and well-being in the urban environment

Career prospects

Graduates' versatility and expertise allow them to pursue a wide variety of positions in urban, environmental and territorial planning:

- Managers of sustainable urban and territorial planning
- Developers of public policies and strategic development
- Project managers in large-scale urban transition projects
- Consultants for transportation and mobility operators and urban infrastructure providers
- Consultants in medical institutions focused on health and urban environments
- NGOs focused on sustainable urban practices and transitions
- R&D in a research institution or a university

School of Architecture, Civil and Environmental Engineering
go.epfl.ch/master-urban-systems
 Contact: urbansystems.info@epfl.ch

	Credits
Core foundations	19
Computational systems thinking for sustainable engineering	4
Social justice and transition in the urban context	3
Systems approaches for urban transitions	4
Urban digital twins	4
Urban governance	4

Core options	15
Climate and water sensitive urban design	4
Computational methods in urban studies	3
Ecological contributions to cities in transformation	3
Innovation for construction and the environment	3
Introduction to transportation systems	3
Railway systems and their transition	3
Science and technology in urban transformation	3
Science of climate change	4
Sensing and spatial modeling for earth observation	5

Specializations	A	B	C	30
AI for urban history		B	C	4
Air pollution			C	5
Analyse territoriale et urbaine		B		4
Behind/Beyond future cities		B		3
Building design in the circular economy		B		3
City and mobility	A			3
Comfort and architecture: sustainable strategies			C	3
Conception et réalisation des voies de circulation	A			3
Decision-aid methodologies in transportation	A			4
Digital epidemiology			C	4
Energy supply, economics, and transition	A	B		2
Exploratory data analysis in environmental health			C	4
Fundamentals of traffic operations and control	A			4
Green spaces- concepts and planning approaches	A	B	C	4
Groundwater and soil remediation			C	4
Image processing for earth observation	A		C	4
Indoor air quality and ventilation			C	4
Ingénierie de la mobilité	A			3
Material and energy flow analysis		B		4
Occupational and environmental health			C	3
Planetary health		B	C	4
Shaping future railway systems	A			3
Sociologie urbaine			C	3
Spatial and regional economy	A	B	C	3
Sustainability assessment of urban systems	A	B		3
Technology, sustainability, and public policy	A			4
Transportation economics	A			3
UE I : Territory and landscape		B		4
Urban demography	A		C	3
Urban green&blue infrastructure and global warming		B	C	3
Urban habitat and development		B		3
Urban hydraulic systems		B		3
Urban public transport systems	A			3
Urbanism and territories		B		3