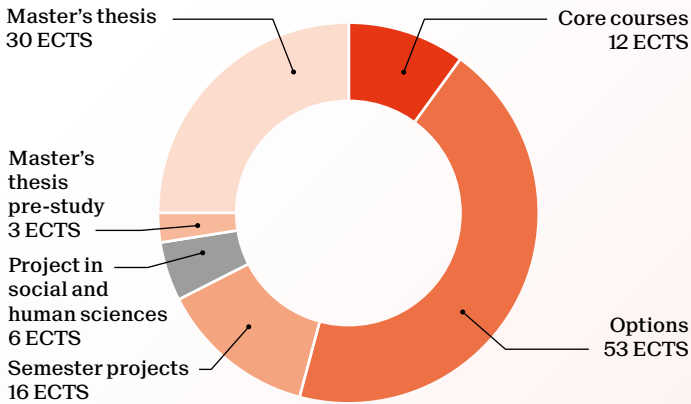


Master of Science in CIVIL ENGINEERING

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 may choose a 30 ECTS specialization:

- B Geotechnical engineering
- C Transportation and mobility
- D Structural engineering
- E Hydraulic engineering and energy

Or opt for a 30 ECTS minor included in the options.

Minors recommended with this Master:

- Computational science and engineering
- Integrated design, architecture and sustainability (IDEAS)
- Energy
- Management, technology and entrepreneurship
- Urban planning and territorial development (DTU)

The EPFL civil engineering academic performances are top-rated at the international level. Its master curriculum is widely recognized for the high quality of its training and offers very good perspectives of professional insertion.

The increased demand in Switzerland for highly qualified engineers in the civil engineering sector provides excellent career prospects for our students. Civil engineering consulting firms, state administrations and construction companies all benefit from hiring our graduates. Furthermore, the scientific skills and the versatility of our engineers also allow them to pursue very diverse professional activities. Whatever path you choose, you will collaborate with numerous partners from the domains of architecture, environment, sociology, economy, energy, or politics. The know-how of the Swiss civil engineers is very well respected abroad, which also opens the door to an international career.

School of Architecture, Civil and Environmental Engineering
go.epfl.ch/master-civil-engineering
 Contact: sgc@epfl.ch

	Specializations				Credits
	B	C	D	E	
Core courses					12
Building energetics					3
Dynamique des structures			D		3
Fundamentals of traffic operations and control		C			3
Geomechanics	B				3
Ouvrages hydrauliques et aménagements hydroélectriques				E	3

Options	B	C	D	E	Credits
Options					53
Computational geomechanics	B				3
Energy geostructures	B		D	E	3
Engineering geology for geo-energy	B				3
Géologie de la construction et de l'environnement	B			E	3
Geophysics for engineers	B				3
Innovation for construction and the environment	B	C	D	E	3
Slope stability	B				3
Travaux souterrains	B			E	3
Advanced continuum mechanics	B		D		3
Nonlinear analysis of structures			D		3
Programming concept in scientific computing	B				4
Selected topics in mechanics of solids and structures	B		D		3
Advanced composites in engineering structures			D		3
Advanced design of concrete structures			D		3
Composites design and innovation			D		3
Conception des constructions en bois			D		3
Matériaux et structures			D		3
Structure et architecture			D		3
Structures complexes			D		3
Structures en béton, chapitres choisis			D		3
Structures en métal, chapitres choisis			D		3
Advanced steel design			D		3
Ponts en béton			D		3
Seismic engineering	B		D	E	3
Structural stability			D		3
Structures existantes, bases	B		D	E	3
Structures existantes, chapitres choisis	B		D	E	3
Barrages et ouvrages hydrauliques annexes	B		D	E	3
Éco-morphologie fluviale				E	3
Hydraulique fluviale et aménagement des cours d'eau	B			E	3
Ondes de crue et de rupture de barrage				E	3
Urban hydraulic systems				E	3
Économie hydraulique				E	2
Modélisation des systèmes énergétiques		C		E	3
Planification intégrée des infrastructures d'énergie				E	3
Thermodynamics of comfort in buildings				E	3
Decision-aid methodologies in transportation		C			4
Deep Learning for autonomous vehicles		C			4
Infrastructures de transport I	B	C			3
Infrastructures de transport II	B	C			3
Transportation economics		C			3
Villes et transports		C			3
Analyse et gestion de risques	B		D	E	3
Analyse et management des risques industriels					3
Droit de la construction pour ingénieurs I	B		D	E	2
Droit de la construction pour ingénieurs II	B		D	E	2
Esthétique des ouvrages de génie civil			D		2
Études d'impact	B			E	3
Indoor air quality and ventilation				E	4
Introduction to research skills	B	C	D	E	1
Management de projet et analyse du risque		C			4
Projet interdisciplinaire à option					4

Semester projects	B	C	D	E	Credits
Semester projects					16
Laboratoire GC					4
Projet ENAC ou UE architecture					4
Projet de construction					4
Projet de systèmes civils					4
Summer Workshop					4
UE génie civil: Construction durable ou Docta Manus					4