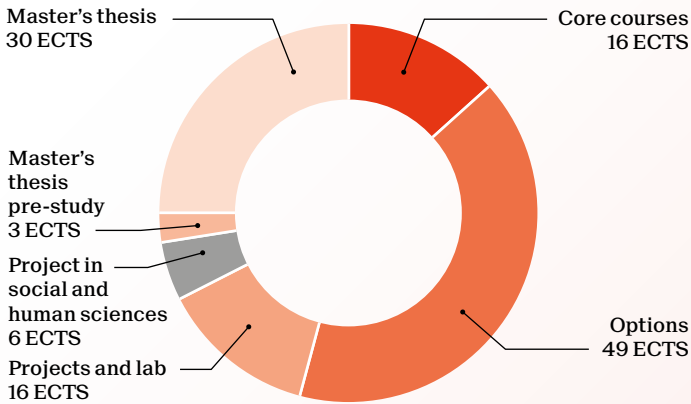


Master of Science in CIVIL ENGINEERING

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 or a 30 ECTS minor included in the options. They can also opt for two specializations or combine a specialization and a minor.

Specializations available:

- B Geotechnics
- C Transportation and mobility
- D Structural engineering
- E Hydraulics and energy

Minors recommended with this Master:

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

Career prospects

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					16
Dynamics of structures			D		4
Energy and comfort in buildings					4
Fundamentals of traffic operations and control		C			4
Geomechanics	B				4
Hydropower schemes and pumped-storage				E	4

Options					49
Computational geomechanics	B				5
Energy geostructures	B			E	4
Engineering geology for geo-energy	B				3
Géologie de la construction et de l'environnement	B				3
Geothermal resource development	B			E	3
Innovation for construction and the environment	B	C	D		3
Rock mass characterization for engineering design	B				5
Slope stability	B				3
Travaux souterrains	B			E	3
Computational systems thinking for sustainable eng.		C		E	4
Continuum mechanics and applications	B		D	E	6
Machine learning for predictive maintenance applications		C	D		4
Nonlinear analysis of structures			D		6
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
Composites design and innovation			D		3
Conception des constructions en bois			D		3
Design of precast concrete structures			D		3
Matériaux et structures			D		3
Structures en métal, chapitres choisis			D		3
Engineering existing structures			D		4
Ponts en béton			D		3
Reinforced concrete structures - advanced topics			D		4
Seismic engineering			D		6
Structural stability			D		4
Dam engineering	B			E	3
Éco-morphologie fluviale				E	3
Flow monitoring technology in water engineering				E	3
Hydraulique fluviale et aménagement des cours d'eau				E	3
Ondes de crue et de rupture de barrage				E	3
Urban hydraulic systems				E	3
Thermodynamics of comfort in buildings				E	3
Water resources management				E	2
Decision-aid methodologies in transportation		C			4
Deep Learning for autonomous vehicles		C			6
Infrastructures de transport I	B	C			3
Infrastructures de transport II		C			3
Mathematical modelling of behavior		C			5
Transportation economics		C			3
Villes et transports		C			3
Analyse et gestion de risques	B		D	E	2
Analyse et management des risques industriels					3
Droit de la construction pour ingénieurs I	B			E	2
Droit de la construction pour ingénieurs II	B			E	2
Études d'impact				E	3
Indoor air quality and ventilation				E	4
Management de projet et analyse du risque		C			4
Quantitative imaging for engineers			D		3
Research skills for engineers	B	C	D		2

Projects and lab					16
Civil engineering laboratory					4
Civil system project					4
Construction project					4
Projet ENAC or UE architecture					4
Summer Workshop					4
UE génie civil: Docta Manus					4