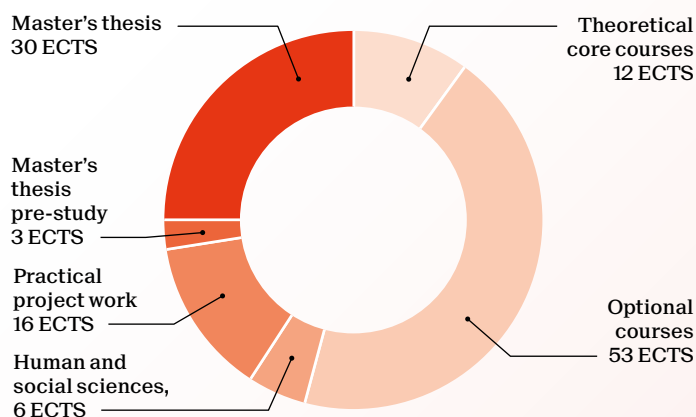


Master of Science in CIVIL ENGINEERING

2-year program - 120 ECTS



The program includes an 8-week compulsory internship

Students may choose to pursue a 30 ECTS specialization:

- B Geotechnical Engineering
- C Transportation and Mobility
- D Structural Engineering
- E Hydraulic Engineering and Energy

Or a 30 ECTS Minor:

- Computational Science and Engineering
- Design Intégré, Architecture et Durabilité (IDEAS)
- Energy
- Management, Technology and Entrepreneurship
- Urban Planning and Territorial Development

A specialization or Minor is included in the 120 ECTS credits.

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
master.epfl.ch/civilengineering
 Contact: pascal.turberg@epfl.ch

	Specialization				Credits
Theoretical core courses					12
Dynamique des structures		D			3
Énergétique du bâtiment					3
Fundamentals of traffic operations and control		C			3
Geomechanics	B				3
Ouvrages hydrauliques et aménagements hydroélectriques			E		3
Optional courses					53
Advanced Composites in Engineering Structures	B		D		3
Advanced methods in computational solid mechanics	B		D		3
Advanced Steel Design			D		3
Analyse et gestion des risques	B		D	E	3
Analyse et management des risques industriels					3
Barrages et ouvrages hydrauliques annexes	B		D	E	3
Construction en bois			D		3
Decision-aid methodologies in transportation		C			4
Développements en économie des transports		C			3
Economie des réseaux d'infrastructures		C			3
Economie hydraulique				E	2
Energy Geostructures	B				2
Engineering geology for geo-energy	B				3
Esthétique des ouvrages de génie civil			D		2
Études d'impact	B			E	3
Exploitation ferroviaire		C			3
Géologie de la construction et de l'environnement	B			E	3
Geophysics for engineers	B				3
Gestion de la maintenance des infrastructures	B	C			3
Hydraulique fluviale et aménagement des cours d'eau	B			E	3
Management de projet et analyse du risque	B	C	D	E	3
Matériaux et structures			D		3
Modélisation des systèmes de transports		C			3
Modélisation des systèmes énergétiques		C		E	3
Non linear analysis of structures			D		3
Ondes de crue et de rupture de barrage				E	3
Organisation, économie et droit de la construction I	B		D	E	2
Organisation, économie et droit de la construction II	B				2
Planification intégrée des infrastructures d'énergie				E	3
Ponts en béton			D		3
Programming Concept in Scientific Computing	B				4
Projet interdisciplinaire à option					4
Réseaux hydrauliques et énergétiques	B			E	3
Reservoir mechanics for geo-energy and the environment	B				3
Seismic engineering	B		D	E	3
Selected topics in mechanics of solids and structures	B		D		3
Slope stability	B				3
Structure et architecture			D		3
Structures complexes			D		3
Structures en béton, chapitres choisis			D		3
Structures en métal, chapitres choisis			D		3
Structures existantes, bases	B		D	E	3
Structures existantes, chapitres choisis	B		D	E	3
Systèmes de transports		C			3
Transport et Télématique		C			3
Travaux souterrains	B			E	3
Urban hydraulic systems				E	3
Villes et transports	B	C			3
Voies de circulation		C			3
Human and social sciences					6
Project in human and social sciences					6
Practical project work					16
Laboratoire GC					4
Projet ENAC ou UE architecture					4
Projet de construction					4
Projet de systèmes civils					4
UE: Environnement et GC or UE génie civil: Construction durable					4
Master's thesis pre-study					3
Pré-étude projet de master					3