

## ENROLMENT REQUIREMENTS MASTER OF CIVIL ENGINEERING 2023-2024

In order to be eligible to take a course, you usually have to meet certain enrolment requirements. These requirements can be both pre- and corequisites. The requirement may be blocking or advisory in nature. At the VUB, there are 4 types of enrolment requirements:

1. Binding prerequisite
2. Advisory prerequisite
3. Binding corequisite
4. Advisory corequisite

Below you will find the definition of the different types of enrolment requirements. Check out the specific enrolment requirements for your programme on the next page.

### **BINDING PREREQUISITE**

Due to certain risks and safety issues, you can only enrol in course X if you have passed, been exempted from or deliberated for course Y. It is not possible to register for courses if you do not meet the binding prerequisite.

### **ADVISORY PREREQUISITE**

The curriculum council strongly recommends that you only enrol in course X if you have taken course Y. Although this prerequisite is not binding and it is possible to register for course X without having taken course Y, it is your own responsibility not to follow the programme's advice. This means that you do not have the required competencies.

### **BINDING COREQUISITE**

You can only enrol in course X if you are also simultaneously registered for (or have already passed/been exempted from) course Y. In order to achieve the learning results of course X in a safe/good way, a registration for course Y is necessary. It is not possible to register for courses if you do not meet the binding corequisite.

### **ADVISORY COREQUISITE**

The curriculum council strongly recommends that you only enrol in course X if you are simultaneously registered for (or have already passed/been exempted from) course Y. Although this corequisite is not binding and it is possible to register for course X without simultaneously taking course Y, it is your own responsibility not to follow the programme's advice. This means that you do not have the required competencies.

**HAVE A LOOK AT THE ENROLMENT REQUIREMENTS FOR YOUR PROGRAMME**



## Enrolment requirements Master of Civil Engineering (120 ECTS-credits) 2023-2024

### YEAR 1 (60 ECTS)

Course title	Sem	ECTS	Binding prerequisite	Advisory prerequisite	Binding corequisite	Advisory corequisite	Additional requirements
<b>Compulsory courses (60 ECTS)</b>							
<b>Module fundamentals in Civil Engineering (18 ECTS)</b>							
Design of steel structures	1	5					
Design of concrete structures	1	5					
Geotechnical engineering	1	5					
Prestressed concrete	2	3					
<b>Module challenges in large civil structures (17 ECTS)</b>							
Structural analysis and finite elements	1	5					
Experimental techniques for characterization of construction materials	1	4					
Non-linear modeling of materials and structures	2	4					
Dynamics of structures	2	4					
<b>Module transversal skills and industrial applications (20 ECTS)</b>							
Digitalization in construction	1	4					
Research methods in civil engineering	2	3					
Design project in civil engineering	2	9					
Sustainability in construction	2	4					
<b>Project management (max 5 ECTS)</b>							
Architecture, engineering and construction project management	2	5					
Team leader project	1+2	5					
Development cooperation project	1+2	5					

### YEAR 2 (60 ECTS)

Course title	Sem	ECTS	Binding prerequisite	Advisory prerequisite	Binding corequisite	Advisory corequisite	Additional requirements
<b>Compulsory course (24 ECTS)</b>							
Master Thesis	1+2	24		Research methods in civil engineering			Only for students who are able to graduate
<b>Semi-elective modules (18 or 20 ECTS)</b>							
<b>Innovative design of civil engineering structures (10 ECTS)</b>							
Lightweight composite structures	1	4					
Integrated structural design	2	6					
<b>Geotechnologies for sustainable developments (10 ECTS)</b>							
Groundwater modelling	1	5					
Energy geomechanics	2	5					

Reliability and monitoring in civil engineering (8 ECTS)							
Robustness of structures and reliability of materials	1	4					
Structural health monitoring, maintenance and repair	2	4					
<b>Elective courses (16 or 18 ECTS)</b>							
<b>Electives: Internship</b>							
Internship 40 days	1+2	6					
Internship 60 days	1+2	10					
<b>Electives: Structures</b>							
Parametric design of transformable structures	1	4					
Spatial structures: design and analysis	2	4					
Steel bridge construction	2	3					
<b>Electives: Building physics and architecture</b>							
Room acoustics	1	3					
Bioclimatic design	2	5					
Energy performance of buildings	2	6					
<b>Electives: Water resources</b>							
Water resources management 2: EU and international framework	1	5					
Land-climate dynamics	1	5					
Surface water hydrology	1	5					
Urban hydrology and hydraulics	1	5					
Surface water modelling	1	5					
<b>Electives: Management, economics and law</b>							
Business aspects of technology: factory of the future	1	3					
Business management and entrepreneurship	1	3					
Human resource management	2	6					
Urban and construction law	2	3					
<b>Electives: Miscellanea</b>							
Infrastructure and mobility	2	5					
Design project competition	2	4					
English for professional purposes	1+2	5					
<b>Electives: courses from other semi-elective modules</b>							
Lightweight composite structures	1	4					
Groundwater modelling	1	5					
Robustness of structures and reliability of materials	1	4					
Integrated structural design	2	6					
Energy geomechanics	2	5					
Structural health monitoring, maintenance and repair	2	4					