ENROLMENT REQUIREMENTS MASTER OF ELECTRICAL ENGINEERING

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

VRIJE UNIVERSITEIT BRUSSEL

Enrolment requirements Master of Electrical Engineering (120 ECTS-credits)

YEAR 1 (60 ECTS)

Course title	Sem	ECTS	Binding prerequisite	Advisory prerequisite	Binding corequisite	Advisory corequisite	Additional requirements
Compulsory courses (56 ECTS)							
Communication networks: protocols and architectures	1	5					
Control system design	1	5					
Signal theory	1	4					
Digital signal processing	1	4					
Digital architectures and design	1	4					
Analog electronics	1	5					
Measurement and data driven modeling	2	4					
Modulation and coding	2	5					
Microprocessor architecture	2	5					
Image processing	2	5		Digital signal processing			
Communication channels	2	5					
Sensors and microsystem electronics	2	5					
Elective courses (4 ECTS)							
Operating systems and security	1+2	4					
Project on sustainable Electronics and IC	1+2	4					

YEAR 2 (60 ECTS)

Course title	Sem	ECTS	Binding prerequisite	Advisory prerequisite	Binding corequisite	Advisory corequisite	Additional requirements
Master thesis	1+2	24					Only for students who are able to graduate
Compulsory option packages (24 ECTS)							
Option 1: Nano-, opto-electronics and embedded systems							
Nano-electronic devices and technologies	1	5					
High-frequency electronics and antennas	1	5					
Photonics	1	4					
Software and engineering for embedded systems	2	5					
Advances digital architectures	2	5					
Option 2: Information and communication technology systems							
Computer vision	1	4					
Mobile and wireless networks	1	4					
Image and video technology	1	3					
Wireless communication channels	2	4		Communication channels	Digital communications		Project held commonly with the course Wireless communication channels. The 2 courses are organised in parallel.

Digital communications	1	4		Modulation and coding	Wireless communication channels		Project held commonly with the course Wireless communication channels. The 2 courses are organised in parallel.
Machine learning and big data processing	2	5					
Option 3: Measuring, modelling and control							
Optimization-based control design	1	4					
Selected topics in nonlinear systm identification	1	3					
Identification of dynamical systems	1	5		Measurement and data-driven modelling			
Advanced measurement and data driven modeling	1	4		Measurement and data-driven modelling			
Machine learning and big data processing	2	5					
Model-based and data driven fault detection and isolation	2	3		Control system design			
Elective courses (12 ECTS)							
Hands-on channel coding - towards maximal capacit	1	6					
CAE-tools for the design of analog electronic circuits	2	3					
Internship 40 days	1	6					
Internship 60 days	1	10					
3D graphics in VR	1+2	5					
Machine Learning for the physical layer: design and analysis	1	3					
Entrepreneurship	1	3					
Lasers	1	4					
Optical materials	1	6					
Photonic communication systems	1	5					
Cryptography	2	3					
Pattern recognition and image analysis	2	5					
Capita selecta multimedia	2	3					
Entrepreneurial ecosystems	2	5					
Theory of information, coding, computing and complexity	2	5					
Laboratories in photonics research	2	6					
Industrual measurement environments	2	4					
Network security	2	3					
Capita selecta telecom	2	3					
Aftificial organs	2	5					
Theory and practive of advanced control	2	4					
Multiprocessors and reconfigurable architectures	1+2	3					
Embedded system security	2	5					
Sustainability and Ecological Economics of ICT	2	3					