

## First Year

### Compulsory courses

GCIV0201-1	<i>Choice and maximisation of construction materials</i> - Luc COURARD	30	30	-	<b>5</b>
GCIV2032-1	<i>Design and means of erection of structures and bridges</i> - Jean-Marie CREMER, Jean-Marc FRANSSSEN	30	30	-	<b>5</b>
GCIV2033-2	<i>Steel, concrete, timber and composite steel-concrete construction</i> - Jean-Claude DOTREPPE, Jean-Marc FRANSSSEN, Jean-Pierre JASPART - [2d FW]	60	60	[+]	<b>10</b>
GEOL0001-1	<i>Geology and Geology for Engineers</i> - Alain DASSARGUES - [2d FW]	35	25	[+]	<b>5</b>
GCIV2034-1	<i>Applied hydraulics</i> - Michel PIROTON	30	30	-	<b>5</b>
GCIV2035-1	<i>Environmental hydrodynamics</i> - Benjamin J. DEWALS, Michel PIROTON	30	30	-	<b>5</b>
GCIV2036-1	<i>Soil and rock mechanics</i> - Albert BOLLE, Frédéric COLLIN	25	25	-	<b>4</b>
GCIV2037-1	<i>Structural Mechanics II</i> - Hervé DEGÉE	35	35	-	<b>6</b>
GCIV0185-2	<i>Numerical methods in Civil and Geological Engineering - I. Linear methods</i> - <i>Linear methods</i> - Hervé DEGÉE, Michel PIROTON	30	30	-	<b>10</b>
	- <i>Linear and non-linear methods</i> - Robert CHARLIER, Vincent DE VILLE DE GOYET	30	30	-	
GCIV2038-1	<i>Planning and technical-economic analysis</i> - Jean MARCHAL	15	15	-	<b>3</b>
GCIV2039-2	<i>Seminar</i> - Serge CESCOTTO, COLLÉGIALITÉ - [2d FW]	20	-	[+]	<b>2</b>

Notice : Students who have, in their BAC studies, already the compulsory course GEOL0001-1 *Geology and Engineering Geology* featuring on this Master's programme are obliged to replace it by a course chosen from:

- \* GEOL0023-4 *Engineering Geology (integrated group project* - 10h+30h+2jT.t - 5 crédits - NGUYEN F.
- \* ARCH00003-4 *Techniques of Building Construction I - Part I* - 30h+30h+2,5jT.t - 5 credits - N.

### Students studying for the Bachelors in Civil Engineering who have not chosen the appropriate option :

- \* must take all the so-called "prerequisite" courses hereafter, if they were not taken during the 1st cycle. These courses must be taken during the 1st year of the masters and some 1st-year compulsory courses must be rolled over to the 2nd year.
- \* must subsequently reduce the number of courses they choose to take in the 2nd year of the masters. If all the "prerequisite" courses must be taken, it will be impossible for them to choose which courses they take.
- \* cannot choose the professional "management" focus.

The program adapted by these students has to receive the preliminary agreement of the Jury.

### Compulsory prerequisites

GCIV0097-1	<i>Steel and concrete constructions I</i> - Jean-Claude DOTREPPE, Jean-Pierre JASPART	30	30	-	<b>5</b>
GCIV0603-1	<i>Geotechnics</i> - Robert CHARLIER	30	30	-	<b>5</b>
GCIV0604-1	<i>Hydraulics</i> - Michel PIROTON	15	15	-	<b>3</b>
GCIV0184-2	<i>Building Materials</i> - Luc COURARD	30	30	-	<b>5</b>
MECA0012-5	<i>Mechanics of materials (english)</i> - Serge CESCOTTO	30	30	-	<b>5</b>
MECA0442-1	<i>Mechanics of materials II</i> - Serge CESCOTTO	15	15	-	<b>2</b>
GCIV0607-1	<i>Structural mechanics</i> - Jean-Marc FRANSSSEN	30	30	-	<b>5</b>

## Second Year

### Compulsory courses

GCIV2040-1	<i>Hydraulic constructions</i> - Sébastien ERPICUM, Jean MARCHAL, Philippe RIGO - [3d FW]	60	60	[+]	<b>10</b>
ATFE0010-1	<i>Final Work (including an introduction to methodology and research)</i> - COLLÉGIALITÉ - Final year trip: visits to works of art (optional).	-	-	-	<b>20</b>

### Optional courses

Choose one option from the following :

#### Civil Engineering Works

PRCO0001-1 *Integrated civil engineering project* - Serge CESCOTTO, COLLÉGIALITÉ,  
Jean-Marc FRANSSSEN - 80 - 8

*Notice* : Project accompanied by a placement and courses in the following subjects :

GCIV2048-1 *Hydraulic Structures - Part II* - Philippe RIGO 20 20 - 4

GCIV0133-5 *Maintenance, restoration and protection of buildings* - Luc COURARD,  
André PLUMIER 20 10 - 3

GCIV2049-1 *Geotechnical structures* - Albert BOLLE, Robert CHARLIER - [1d FW] 30 30 [+] 6

GCIV2050-1 *Accidental and exceptional actions* - Jean-Claude DOTREPPE, Jean-Marc FRANSSSEN, 20  
Jean-Pierre JASPART, André PLUMIER 20 - 4

ASTG0016-1 *Placement* - COLLÉGIALITÉ - - - 5

#### Transport and Mobility

ARCH2008-1 *Design and planning of urban areas.* - Sigrid REITER 15 15 - 3

ARCH2017-1 *Design and public areas planning* - Philippe HANOCQ 30 40 - 7

GCIV2049-2 *Geotechnical structures* - Albert BOLLE, Robert CHARLIER - [1d FW] 20 20 [+] 4

ARCH2014-1 *Urban and territorial development* - Philippe HANOCQ 30 - - 3

GCIV2052-1 *Techniques for analysing and developing integrated mobility and transport projects* 30  
- Philippe HANOCQ, Jean MARCHAL 50 - 8

ARCH0068-3 *Urban design and site analysis* - Jacques TELLER 20 - - 2

GCIV2053-1 *Inland waterways* - Philippe RIGO 15 15 - 3

#### Architecture and Building Engineering

ELEN0077-4 *Introduction to acoustics and lighting* - Jean-Jacques EMBRECHTS 30 30 - 6

ARCH2015-1 *Air conditioning* - N... - Suppl : Philippe ANDRE 30 35 - 5

GCIV2042-2 *Designing buildings in high-risk areas* - André PLUMIER 16 8 - 3

GCIV2063-1 *Planning buildings, co-ordination and safety on building sites* - Jean-Marie RIGO 15 15 - 3

ARCH0019-2 *Project management II* - N... - Suppl : Dimitri SCHMITZ - [2d FW] 15 15 [+] 4

ELEC0434-1 *Residential electric installations* - Jean-Louis LILIE 15 15 - 3

GCIV0133-6 *Maintenance, restoration and protection of buildings* - Luc COURARD,  
André PLUMIER 30 15 - 4

ARCH0059-1 *Pathology of buildings* - N... 15 - - 2

#### Teaching and civil engineering

GEOL0277-1 *Remediation of contaminated sites* - Alain DASSARGUES, Stoyan GAYDARDZHIEV - 15  
[1d FW] 15 [+] 3

GCIV2056-1 *Environmental building design* - Luc COURARD, Jean-Pierre JASPART 20 10 - 3

GCIV2057-1 *Hydropower exploitation* - Sébastien ERPICUM, Olivier LÉONARD,  
Michel PIROTON 35 25 - 5

GCIV2058-1 *Environmental geotechnics* - Albert BOLLE, Robert CHARLIER, Jean-Marie RIGO - 20  
[1d FW] 20 [+] 4

GCIV2059-1 *Management of drainage bassin and hydrographic constructions* -  
Benjamin J. DEWALS, Michel PIROTON 20 20 - 4

GCIV2060-1 *Environmental management of hydraulic constructions* - Benjamin J. DEWALS,  
Michel PIROTON 20 10 - 3

GCIV0615-1 *Valorisation of industrial byproducts and waste in civil engineering* -  
Luc COURARD 20 20 - 3

ASTG0016-1 *Placement* - COLLÉGIALITÉ - - - 5