

#### Block view of the study programme

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##### Block 1

Depending on your educational background or depending on the focus, it is possible that the prerequisites / corequisites for the 1st year of the programme are presented in the block 2. You are therefore invited to read through the list of courses in block 2 even if you are registering for the first time in this master.

##### Compulsory courses

ARCH2007-2	<i>Environmental design of buildings in the context of sustainable development</i> - AnneFrançoise MARIQUE, Sigrid REITER - Suppl : Sylvain MARBEHANT - [2d FW, 40h Proj.]	Q1	15	30	[+]	4
	<b>Corequisite :</b> ARCH0115-1 - Ateliers d'architecture IV					
ARCH0115-1	<i>Architectural studio IV, integrated conception</i> - Catherine ELSÉN - [1d FW, 88h Proj.]	Q1	20	130	[+]	10
	<b>Corequisite :</b> ARCH0075-3 - Studio Digital Collaboratif BIM ARCH2007-2 - Conception architecturale et urbaine durable					
GCIV0201-2	<i>Concretes and new Materials Technologies</i> - Luc COURARD - [0,5d FW, 6h Labo., 8h Proj.]	Q1	32	20	[+]	5
ARCH0027-2	<i>Conservation and Restoration of Cultural Built Heritage</i> - Pierre PAQUET - [1d FW]	Q1	30	-	[+]	3
ARCH3271-1	<i>Introduction to scientific research</i> - Mario COOLS - [30h Proj.]	Q2	10	10	[+]	2
PHIL0076-1	<i>Aesthetics and contemporary art</i> - Maud HAGELSTEIN	Q2	30	-	-	3
ARCH3283-1	<i>Acoustics and lighting of buildings</i>	Q1				5
	- <i>Introduction</i> - Arnaud THIENPONT		15	14	-	
	- <i>Methods and applications</i> - Arnaud THIENPONT - [16h Proj.]		15	10	[+]	
ARCH0080-1	<i>Building physics and air conditioning</i> - Philippe ANDRE	Q2	30	30	-	5
ARCH2011-1	<i>Sustainable building construction techniques IV : Building renovation</i> - - Suppl : Guirec RUELLAN - [2d FW]	Q2	15	15	[+]	4
	<b>Corequisite :</b> ARCH0027-2 - Conservation et restauration du patrimoine culturel immobilier					
GCIV2063-1	<i>Planning buildings, co-ordination and safety on building sites</i> - Fabian BOUCHER - [1d FW]	Q1	15	15	[+]	2
ARCH2003-1	<i>Urbanisation dynamics</i> - Jacques TELLER - [65h Proj.]	Q2	26	26	[+]	5
ARCH0075-3	<i>Studio Digital Collaboratif BIM</i> - Aurélie DE BOISSIEU, Pierre LECLERCQ - [1d FW, 78h Proj.]	Q2	15	45	[+]	6
	<b>Corequisite :</b> ARCH0115-1 - Ateliers d'architecture IV					
ASTG9002-1	<i>Professional internship</i> - Shady ATTIA - [20d FW, 20h Proj.]	TA	-	-	[+]	3
ARCH3336-1	<i>Setting up real-estate operations</i> - Mathurin SMOOS	Q2	32	-	-	3

*Notice* : Cycle of conferences on the professional competences of the engineer/architect (code of ethics, organising real estate operations, public procurement, etc.): compulsory attendance (Block 1)

*Notice* : Study trip: guided tours on architectural and urbanistic achievements (optional)

##### Block 2

Depending on your educational background or depending on the focus, it is possible that the prerequisites / corequisites for the 1st year of the programme are presented in the block 2. You are therefore invited to read through the list of courses in block 2 even if you are registering for the first time in this master.

##### Compulsory courses

ARCH0116-3	<i>Architectural studio V: integrated project</i> - Jacques TELLER - [1d FW, 150h Proj.]	Q2	-	100	[+]	<b>10</b>
	<b>Corequisite :</b> ARCH0115-1 - Ateliers d'architecture IV					
ATFE0009-1	<i>Master thesis / project</i> - COLLÉGIALITÉ, Mario COOLS - [600h Proj.]	TA	-	-	[+]	<b>20</b>
	<i>Notice :</i> Cycle of conferences on the professional competences of the engineer/architect (code of ethics, organising real estate operations, public procurement, etc.): compulsory attendance (Block 2)					

#### Optional courses

Choose one focus from the following :

##### Professional focus in architectural and urban engineering

ARCH0065-2	<i>Design Process Analysis</i> - Samia BEN RAJEB, Pierre LECLERCQ - [18h Proj.]	Q2	15	30	[+]	<b>3</b>
GCIV0165-1	<i>Timber constructions</i> (english language) - JeanMarc FRANSSSEN	Q1	15	15	-	<b>3</b>
ARCH3282-1	<i>Urban Transport &amp; Mobility</i> (english language) - Mario COOLS - [30h Proj., 2d FW]	Q1	25	25	[+]	<b>5</b>
ARCH2019-1	<i>Engineering of urban environments</i> - Sigrid REITER - [60h Proj.]	Q1	18	36	[+]	<b>5</b>
	<b>Corequisite :</b> ARCH2007-2 - Conception architecturale et urbaine durable					
ARCH2018-1	<i>Urban and territorial governance</i> - Christophe BREUER, Jacques TELLER	Q1	20	-	-	<b>2</b>
ARCH3337-1	<i>Computational design</i> - Aurélie DE BOISSIEU - [1d FW]	Q2	15	42	[+]	<b>2</b>
SPOL2209-3	<i>Environmental and land policies</i> - Sophie HANSON	Q1	30	-	-	<b>2</b>
ARCH3272-1	<i>Building performance simulation and monitoring</i> (english language) - Part 1 - Shady ATTIA - Part 2 - Shady ATTIA - [70h Proj.]	Q1				<b>5</b>
	<b>Prerequisite :</b> ARCH0080-1 - Physique du bâtiment et climatisation					
GCIV0133-9	<i>Maintenance, repair and reinforcement of constructions</i> (english language) - Luc COURARD - [1d FW]	Q1	20	20	[+]	<b>3</b>
	<b>Prerequisite :</b> GCIV0201-2 - Technologie des bétons et matériaux nouveaux					

A visit to a business (optional).

Annual study trip : guided tours on architectural and urbanistic achievements (optional).

Final year trip: at the beginning of the academic year, prior to course organisation, guided tours of architectural and urbanistic achievements (optional).

Cycle of conferences on the professional competences of the engineer/architect (code of ethics, organising real estate operations, public procurement, etc.): compulsory attendance.

##### Professional focus in "urban and environmental engineering"

UEEN0001-1	<i>Water and energy in urban environment</i> (english language) - Pierre DEWALLEF, Benjamin DEWALS - [2d FW]	Q1	26	26	[+]	<b>5</b>
UEEN0002-1	<i>Land rehabilitation in urban environments</i> (english language) - Serge BROUYÈRE, Frédéric COLLIN - [10h Labo., 20h Proj., 2d FW]	Q1	20	10	[+]	<b>5</b>
UEEN0003-1	<i>Urban resilience</i> (english language) - Manal GINZARLY, Jacques TELLER - [60h Proj., 1d FW]	Q1	36	16	[+]	<b>5</b>
UEEN0004-1	<i>Urban planning and transportation</i> (english language) - Mario COOLS, Jacques TELLER - [1d FW]	Q1	26	26	[+]	<b>5</b>
UEEN0005-1	<i>Participatory Design at an Urban Scale</i> (english language) - Catherine ELSÉN, Clémentine SCHELINGS - [20h Proj., 1d FW]	Q1	20	10	[+]	<b>2</b>
UEEN0006-1	<i>UEE Integrated Project</i> (english language) - Luc COURARD - [100h]	Q1	-	90	[+]	<b>5</b>

Proj., 1d FW]

GEOG2053-1 *Introduction to Urban GIS* (english language) - Roland BILLEN Q1 12 20 - 3

*Notice* : with the agreement of the President of the jury, students can also choose a course from catalogue UNIC.

#### Optional courses

A visit to a business (optional).

Final year trip: at the beginning of the academic year, prior to the organisation of the courses, guided tours to companies, geological sites (optional).

#### Additional courses for Erasmus students

LANG0840-1 *French, S1 - 1er quadrimestre* - ISLV, Marielle MARÉCHAL Q1 - - - 5

LANG0840-2 *French, S2 - 2e quadrimestre* - ISLV, Marielle MARÉCHAL Q2 - - - 5

GCIV0008-2 *Energy and transport* (english language) - Mario COOLS - [25h Proj.] Q1 30 15 [+] 4

#### Bloc d'aménagement du programme de l'année

**Additional credits, Master of Science (MSc) in Architectural Engineering (aimed at Bachelors and qualified engineers - in particular students from the "Institut Mines Telecom d'Alès", from the "Ecole d'Ingénieurs de La Rochelle, de Polytech Lille", from the "Institut de Technologie du Cambodge" and from the "EPF Troyes, Sceaux, Montpellier").**

#### Compulsory courses

*Notice* : this programme is likely to be adjusted according to skills previously acquired by the student.

ARCH0002-1 *Methodology of Architectural Projects I : functional and ergonomical composition* - Pierre LECLERCQ - [1d FW, 100h Proj.] TA 30 60 [+] 8

ARCH3270-1 *Architectural studio IA: Graphic composition* - Catherine ELSEN - [1d FW, 35h Proj.] Q1 10 40 [+] 3

ARCH0066-2 *Architectural studio IB: architectural composition* - Catherine ELSEN - [1d FW, 25h Proj.] Q2 10 40 [+] 4

ARCH0006-2 *Methodology of Architectural Projects II : bioclimatic composition* - Pierre LECLERCQ - [1d FW, 85h Proj.] TA 40 50 [+] 8

ARCH0068-7 *Urban planning and site analysis, Theory* - Jacques TELLER Q1 15 20 - 2

ARCH0017-4 *Digital architectural modeling* - Aurélie DE BOISSIEU - [98h Proj.] Q2 20 70 [+] 6

ARCH2224-1 *Architectural culture 2 - history of construction - Antiquity to the 19th century* - Baptiste DRUGMAND, Philippe SOSNOWSKA Q2 40 - - 4

ARCH3260-2 *Architectural studio II, Introduction* - Catherine ELSEN - [1d FW, 85h Proj.] TA 20 70 [+] 7

ARCH3262-1 *Architectural studio III A* - Shady ATTIA - [1d FW, 55h Proj.] Q1 10 35 [+] 5

ARCH3263-1 *Architectural studio III B* - Sigrid REITER - Suppl : Sylvain MARBEHANT - [1d FW, 55h Proj.] Q2 10 35 [+] 4

GCIV2030-2 *Structural Design of Buildings* - JeanMarc FRANSSSEN - [40h Proj.] Q2 15 30 [+] 4

ARCH3281-1 *Summary of construction practices in the building industry* - [1d FW, 30h Proj.] Q1 7 45 [+] 5

**Additional ECTS Master of science in architecture and engineering (aimed at**

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**bachelors in architecture)**

**Compulsory courses**

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MATH0002-5	<i>Mathematical analysis 1</i> - Part 1 - Eric DELHEZ - Part 2 - Patricia TOSSINGS - [26h QA Sess.]	Q1	22	22	-	<b>8</b>
MATH0066-1	<i>Complement of mathematics 2</i> - Patricia TOSSINGS	Q2	26	26	-	<b>4</b>
ARCH0006-2	<i>Methodology of Architectural Projects II : bioclimatic composition</i> - Pierre LECLERCQ - [1d FW, 85h Proj.]	TA	40	50	[+]	<b>8</b>
MECA0001-2	<i>Mechanics of materials</i> - JeanFrançois DEMONCEAU, Laurent DUCHENE - [2h Labo., 12h Proj.]	Q1	27	25	[+]	<b>5</b>
MECA0012-6	<i>Solid mechanics</i> - Laurent DUCHENE - [15h Proj.]	Q2	26	26	[+]	<b>5</b>
GCIV0184-5	<i>Building Materials</i> - Luc COURARD, Anne HABRAKEN - [0,5d FW, 12h Labo., 12h Proj.]	Q2	36	16	[+]	<b>5</b>
GCIV2172-1	<i>Metallic Elements Calculation</i> - JeanFrançois DEMONCEAU - [1d FW, 10h Proj.]	Q2	26	26	[+]	<b>5</b>
GCIV2173-1	<i>Reinforced concrete</i> (english language) - Boyan MIHAYLOV - [1d FW, 10h Proj.]	Q2	26	26	[+]	<b>5</b>
ARCH0009-3	<i>Sustainable building construction techniques III: networks</i> - Shady ATTIA - [1d FW, 45h Proj.]	Q1	17	35	[+]	<b>5</b>
ARCH3281-1	<i>Summary of construction practices in the building industry</i> - [1d FW, 30h Proj.]	Q1	7	45	[+]	<b>5</b>
GCIV0608-1	<i>Introduction to Structures engineering</i> - JeanFrançois DEMONCEAU, Vincent DENOËL, JeanMarc FRANSSSEN - [4d FW, 40h Proj.]	Q1	12	12	[+]	<b>5</b>