

# CATALOGUE OF COURSES

## EXCHANGE STUDENTS

FALL SEMESTER 2021 - 2022

LICENCE 3 & MASTER

..... *Licence 3 - Semester 5 (3rd year)*

..... *Master 1 - Semester 7 (4th year)*

..... *Master 2 - Semester 9 (5th year)*

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**CAUTION : This catalogue of courses is NOT definitive and is subject to changes  
It will be completed during September 2021.**

**Updated on July 12th, 2021.**

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### Semester 5 (Fall semester - 3rd year)

[Click on a course to see the description](#)

#### L5.17 – Project

COURSE	GROUP	CODE	TEACHERS
<b>PROJECT GROUPS - ARCHITECTURAL PROJECT</b>	Architectural project	L517PA01	Y. NUSSAUME, A. SAUBOT
	Architectural project	L517PA02	T. ELEFTERIOU, P. MARTIN
	Architectural project	L517PA03	B. GAUDIN, P. BOUVIER
	Architectural project	L517PA04	V. CORNU, D. AFANASSIEFF
	Architectural project	L517PA05	M. BOTINEAU, N. FÉVRIER
	Architectural project	L517PA06	P. HOFTSEIN, A. ROQUEPLO
	Architecture of Building	L517PA07	J. MARIN, S. MAHE
	Architectural project <i>[to be completed]</i>	L517PA08	E. VEIT, P. LAUZANNE
	Architectural project	L517PA09	V. PIGNOT, P. FARRET
	Architectural project	L517PA10	D. HENRY, D. DEHOUX
	Collective housing, urbanity, intimacy, constructability	L517PA11	J. POMMIER, E. ROBIC
	Architectural project	L517PA12	O. CHASLIN, S. BOURLIS

#### L5.17 – Transversal approach - study trip

STUDY TRIP OF ONE WEEK WHICH WILL TAKE PLACE FROM 30TH OF NOVEMBER TO 5TH OF DECEMBER 2020.  
 IT IS RESERVED **AND COMPULSORY** FOR THE STUDENTS WHO ATTEND A PROJECT COURSE OF SEMESTER 5 (L5.17 PA).  
**ECTS REFERRING TO L517PA COURSE WILL BE AWARDED ONLY IF THE STUDENT TAKES PART TO THIS STUDY TRIP**

#### L5.17 – Architecture theory

COURSE	GROUP	CODE	TEACHERS
<b>ARCHITECTURE THEORY - COLLECTIVE HOUSING</b>		L517CT	V. PIGNOT

#### L5.18 – Structure / Construction

COURSE	GROUP	CODE	TEACHERS
<b>STRUCTURE / CONSTRUCTION + TD</b>	Group 1	L518SC01	F. GAUBIN, M. HABES
	Group 2	L518SC02	L. BERGER

#### L5.18 – Atmospheres

COURSE	GROUP	CODE	TEACHERS
<b>ATMOSPHERES + TD</b>	Group 1	L518AM01	N. BELKADI, C. SOUETCHEVA KIROV
	Group 2	L518AM02	M. LOPEZ-DIAZ

### Semester 5 (Fall semester - 3rd year)

[Click on a course to see the description](#)

#### L5.19 – History

COURSE	GROUP	CODE	TEACHERS
MODERN AND CONTEMPORARY ARCHITECTURE HISTORY	Group 1 <i>[to be completed]</i>	L519HA01	S. RADOUAN
	Group 2 <i>[to be completed]</i>	L519HA02	E. KOERING

#### L5.19 – Social sciences

COURSE	GROUP	CODE	TEACHERS
SOCIAL SCIENCES	Human Sciences	L519SH01	E. MACAIRE, V. BIAU, Y. DRIS
	Human Sciences	L519SH02	E. AMOUGOU
	Human Sciences	L519SH03	A. DE BIASE

#### L5.20 – Computer science

COURSE	CODE	TEACHERS
COMPUTER REPRESENTATION OF THE PROJECT	L520RA	

#### L5.20 – Plastic arts

COURSE	GROUP	CODE	TEACHERS
PLASTIC APPROACH	Plastic approach - free subject	L520DPO1	A. FREMY
	Art and the city, the 1% artistic and public orders	L520DPO2	P. VACHON
	Drawing and volumes to act in space	L520DPO3	L. DELARUE
	Plastic approach <i>[to be completed]</i>	L520DPO4	V. JOUVE
	Plastic approach <i>[to be completed]</i>	L520DPO5	C. DENNEULIN
	Repair (visual arts and sculpture)	L520DPO6	M. DESSARDO

#### L5.20 – Modern Language

COURSE	GROUP	CODE	TEACHERS
MODERN LANGUAGE	English	L520LA	G.-L. JONES
	Spanish	L520LE	V. TABOADA
	Italian	L520LI	P. DEL PEZZO
	German	L520LD	D. MONCY-SPANIOLL
	Portuguese	L520LP	J. ALMEIDA
	French as a foreign language	L520LF	F. HUET

### Semester 7 (Fall semester - 4th year)

[Click on a course to see the description](#)

#### M.7.1 – Project

FIELD OF STUDY	CODE	GROUP	TEACHERS
<b>IEHM</b> Inventing within the existing: Heritage and change	P701	<b>Heritage rehabilitation of buildings and territory</b>	D. DEHOUX
	P702	<b>Inventing within the existing</b>	M. BOTINEAU
	P703	<b>Large Complex: becoming and changing</b>	R. HELMHOLZ, M. LEPINAY
<b>CCA</b> Conceive and Construct architecture: history, theory, criticism	P704	<b>Already there : resources, transformation, construction</b>	E. MOURIER, M. SAIMPERT
	P705	<b>Naval architecture</b>	C. BARREAU, F. NEUMAN
<b>MTP</b> Architecture of Milieux, Territories, Landscapes	P706	<b>Territories emerging: the inhabited fringe</b>	A. BOYADJIAN, J. LIPSKY
	P707	<b>Landscape/s, architecture and natural hazards: urban coastal territories</b>	S. ROUSSEL, B. CIMERMAN
	Po8	<b>Persona grata, Urban Mobile Interference Structures Design / Fabrication</b>	Y. MAHIEU
<b>HMU</b> Living in urban worlds	P709	<b>Architectural and urban project</b>	P. PUMAIN, L. PÉNISSON
	P710	<b>Environnements, architecture and landscape</b>	F. LIPSKY, F. MEADOWS
	P711	<b>Architecture of housing, residential perspectives</b>	P. CHAVANNES, T. ELEFTERIOU
	P712	<i>[to be completed]</i>	A. FERNANDEZ, G. MAURIZIO

### Semester 7 (Fall semester - 4th year)

[Click on a course to see the description](#)

#### M.7.1 – Cross-Disciplinary course intra-domain

FIELD OF STUDY	CODE	GROUP	TEACHERS	NBER H.	ECTS
HMU Living in urban worlds	CTID701	Esthetical acoustics	G. BILLAUX	21	1,5
	CTID702	Energy transition and Eco-construction	F. SOUCARRAT CHAUDHURI	21	1,5
	CTID703	Transmission of architecture	C. VALLECILLO	42	3
	CTID704	Fighting against unworthy dwellings – tools and practices	J.-B. EYRAUD	42	3
	CTID706	GRAND PARIS OBSERVATORY: or how to follow the transformation of the metropolis	A. DE BIASE, P. ZANINI	42	3
	CTID707	GLOBAL DESIGN An invitation to do research through making	A. TUFANO, M. ANTONIOLI	42	3
	CTID708	Learning from India and its 29 states Culture & Heritage	F. SOUCARRAT CHAUDHURI	42	3
	CTID709	Architectural design and ergonomic approach	M. FENKER	21	1,5
	CTID710	Infraordinary of Modernity	O. BOUCHERON	21	1,5
	AS Arts and scenography	CTID711	Urban sound workshop	G. BILLAUX	21
CTID713		Artistic experimentation at Châlon sur Saône	A. PETITRENAUD, O. JEUDY	42	3
CTID714		Scenography: studio – projects	B. PIGOT, M. MAZLOUMAN	42	3
CTID715		Detour in sculpture !	M. DESSARDO, Y. ROUBY	42	3
CTID716		Trees in the city, trees for the city	B. NAVINER	42	3
CTID717		Build for a story: the model as a movie set	E. RESTREPO	42	3
CTID733		Film editing, written editing	H. REIP, M. NEGRO, V. JOUVE, F. PINATEL	21	3

### Semester 7 (Fall semester - 4th year)

[Click on a course to see the description](#)

#### M.7.1 – Cross-Disciplinary course intra-domain

FIELD OF STUDY	CODE	GROUP	TEACHERS	NBER H.	ECTS
<b>CCA</b> Conceive and Construct architecture: history, theory, criticism	CTID718	The longest bridge	M. DESSARDO	42	3
	CTID719	Elements of cognitive sciences for architectural design: psychology and applied neurosciences	A. TÜSCHER	21	1,5
	CTID720	Floating structures	F. NEUMAN	21	1,5
	CTID721	Nothing will take place but the place	P. VACHON	21	1,5
	CTID722	Critical history of architecture and urbanism in modern and contemporary Japan	M. BOURDIER	42	3
	CTID723	The act of Building: from designing to building with a specific focus on the construction phase <i>[to be completed]</i>	D. FEICHTINGER	42	3
	CTID724	Digital design: Conception, modelisation and fabrication	F. BERTRAND	21	1,5
	CTID725	History/ies, treatises and doctrines: creation workshop	D. GABBARDO	21	1,5
<b>IEHM</b> Inventing within the existing: Heritage and change	CTID726	Heritage/s and changes	P. DEHAN	21	1,5
	CTID727	Urbicide : Heritage in conflit - Destruction, ruin and reconstruction	B. PATTERSON	42	3
	CTID728	Architecture and Heritage in Latin America	V. TABOADA	42	3
	CTID729	Industrial heritage: Art/Architecture	F. PINATEL, C. DENNEULIN	42	3
	CTID730	Ways of Looking at Things, Here and There	L. ADRIAN ARANEDA, V. LAGUIA	42	3
<b>MTP</b> Architecture of Milieux, Territories, Landscapes	CTID732	Past/present/future of a territory: Architecture, Urbanism, Landscape and Light/ sound	D. COUILLARD	21	1,5
	CTID735	Learning from Asian cities	J. NJOO		

### Semester 7 (Fall semester - 4th year)

[Click on a course to see the description](#)

#### M.7.2 – Thematic seminar

FIELD OF STUDY	CODE	GROUP	TEACHERS
<b>AS</b> Arts and scenography	S701	<b>Plastic approaches and urban territories</b>	R. DE MARCO, O. JEUDY, L. FALZON, C. SZANTO, L. LOPEZ
	S702	<b>Scenography and architecture: Scenography, an art of place</b>	M. MAZLOUMAN, J. GAUTEL, Y. KNEUSE
	S703	<b>Art, Cinema, Architecture</b>	F. PINATEL, H. REIP, M. NEGRO, E. RESTREPO RESTREPO, M. SAIDI CHAROUZ
<b>HMU</b> Living in urban worlds	S704	<b>APUS 1 Seminar (Architecture, Urban Project and societies)</b>	E. AMOUGOU, S. WACHTER, Y. GOURVIL, C. ORIOL
	S705	<b>Habitat and sustainable city, for a critical approach to “making the urban”</b>	A. D’ORAZIO, E. MACAIRE, V. ZAMANT
	S714	<b>Architecture of inhabited spaces : process, urbanity, spatiality [to be completed]</b>	J. POMMIER
	S715	<b>Territories of political ecology [to be completed]</b>	M. ANTONIOLI
<b>MTP</b> Architecture of Milieux, Territories, Landscapes	S707	<b>Architecture/S and Landscape/S: fundamentals</b>	R. DEMARCO, C. LUXEMBOURG, O. JEUDY, C. LEBARBAY, C. ZAHARIA
	S708	<b>Inhabited areas’ architecture : philosophy, architecture, urban</b>	X. BONNAUD, A. FREMY, D. SZUTER, C. BODART, D. DELMOND
	S709	<b>sustainable factory of all world</b>	C. PEDELAHORE, J. JAUPITRE, V. LAGUIA
<b>CCA</b> Conceive and Construct architecture: history, theory, criticism	S710	<b>Constructive practices of the architectural project – critical and prospective perspectives</b>	S. BALEZ, D. HAMANI, N. BELKADI, M. LEYRAL, G. FAAS, V. COMITO
	S711	<b>Critical and historical approach of architecture and city</b>	P. CHABARD, S. DESCAT, L. DESTOMBES
	S712	<b>Activities and instrumentation of conception</b>	F. GUÉNA, A. TUSCHER, J. SILVESTRE
<b>IEHM</b> Inventing within the existing: Heritage and change	S713	<b>History and practices: Transformations of the built framework</b>	K. BOWIE, C. MAUMI, L. BASSIÈRES
	S716	<b>The built Cultural heritage : expertise and appropriation in France and abroad [to be completed]</b>	I. IOSA



### Semester 7 (Fall semester - 4th year)

#### M.7.2 – Introduction to research

FIELD OF STUDY	CODE	GROUP	TEACHERS
<b>AS</b> Arts and scenography	IR701	<b>Plastic approaches and urban territories</b>	R. DE MARCO, O. JEUDY, L. FALZON, C. SZANTO, L. LOPEZ
	IR702	<b>Scenography and architecture: Scenography, an art of place</b>	M. MAZLOUMAN, J. GAUTEL, Y. KNEUSE
	IR703	<b>Art, Cinema, Architecture</b>	F. PINATEL, H. REIP, M. NEGRO, E. RESTREPO RESTREPO, M. SAIDI CHAROUZ
<b>HMU</b> Living in urban worlds	IR704	<b>APUS 1 Seminar (Architecture, Urban Project and societies)</b>	E. AMOUGOU, S. WACHTER, Y. GOURVIL, C. ORIOL
	IR705	<b>Habitat and sustainable city, for a critical approach to “making the urban”</b>	A. D’ORAZIO, E. MACAIRE, V. ZAMANT
	IR714	<b>Architecture of inhabited spaces : process, urbanity, spatiality</b>	J. POMMIER
	IR715	<b>Territories of political ecology</b>	M. ANTONIOLI
<b>MTP</b> Architecture of Milieux, Territories, Landscapes	IR707	<b>Landscape/S: fundamentals</b>	R. DEMARCO, C. LUXEMBOURG, O. JEUDY, C. LEBARBAY, C. ZAHARIA
	IR708	<b>Inhabited areas (philosophy, architecture, urban, environment) places, milieu, heritages: separation/ reliance</b>	X. BONNAUD, A. FREMY, D. SZUTER, C. BODART, D. DELMOND
	IR709	<b>Spatial and cultural manufacturing of sustainable territories</b>	C. PEDELAHORE, J. JAUPITRE, V. LAGUIA
<b>CCA</b> Conceive and Construct architecture: history, theory, criticism	IR710	<b>Constructive practices of the architectural project – critical and prospective perspectives</b>	S. BALEZ, D. HAMANI, N. BELKADI, M. LEYRAL, G. FAAS, V. COMITO
	IR711	<b>Critical and historical approach of architecture and city</b>	P. CHABARD, S. DESCAT, L. DESTOMBES
	IR712	<b>Activities and instrumentation of conception</b>	F. GUÉNA, A. TUSCHER, J. SILVESTRE
<b>IEHM</b> Inventing within the existing: Heritage and change	IR713	<b>History and practices: Transformations of the built framework</b>	K. BOWIE, C. MAUMI, L. BASSIÈRES
	IR716	<b>The built Cultural heritage : expertise and appropriation in France and abroad</b>	I. IOSA

***This course is aimed at giving an introduction to methodology in research. It only concerns students who need to write a dissertation or «memoire» In that case, the student is supposed to attend the M7.2 IR «introduction to research» corresponding to the M7.2 S «Thematic seminar» (for example : M7.2 S701 and M7.2IR701)***

### Semester 7 (Fall semester - 4th year)

[Click on a course to see the description](#)

#### M.7.2 – History

GROUP	CODE	TEACHERS
A history of heritage, 19th-21th centuries	HA701	L. BASSIERES
Immediate history of a century's end	HA702	P. CHABARD
A history of the human environment	HA703	C. MAUMI
History of gardens and urban green sites	HA704	B. NAVINER
Constructive thinking. History, theories, analysis	HA705	L. DESTOMBES

#### M.7.2 – Philosophy or Sociology

GROUP	CODE	TEACHERS
Sociology : Metropolitization, globalization and cosmopolitanism	SH701	L. LOPEZ, M. SAIDI SHAROUIZ
Philosophy : Philosophical issues in cognitive sciences for art and architecture: from psychology to the neurosciences	PH701	A. TÜSCHER
Philosophy : The political stakes, Political ecology and philosophy	PH702	M. ANTONIOLI

#### M.7.3 – Construction / Atmospheres

GROUP	CODE	TEACHERS
Architectural light and acoustics	CTA701	J.-P. RIGAUD
Technology and building	CTA702	V. POIRIER, A. ROLL
Wood-intensive: the tree that reveals the forest	CTA703	V. COMITO
Rehabilitation and sustainable development	CTA704	M. LOPEZ-DIAZ
Simulation and thermal atmosphere evaluation	CTA705	D. HAMANI
Curved forms structures, hull and taut canvasses	CTA706	B. BAZIN, G. VERYN FORRER
Light structures, art & biomechanics Design & build	CTA707	Y. MAHIEU, A. KREWET
Explore to scale 1	CTA708	M. LEYRAL, Q. CHEF, P. GUEROLD
Building day by day : structural archetypes details	CTA709	S. EBODE
Knowledge and interventions on old-build structures	CTA710	L. BERGER
Façades, basic notions	CTA711	S. BARA
Construction economics	CTA712	C. SOURTCHEVA KIROV

### Semester 7 (Fall semester - 4th year)

[Click on a course to see the description](#)

#### M.7.3 – Digital transition - BIM - Representation

GROUP	CODE	TEACHERS
Introduction to design (naval architecture, object...)	TR701	P. HANNEQUIN
Maquette as conception tool	TR702	J. BERGNA, A. RAYNAUD
Optional photo	TR703	H. JEZEQUEL
Digital urban model as an architecture tool	TR704	F. COUSSON
Architectural survey practices	TR705	D. BEAUTEMS
Drawing and modelling curved-form structures, hull and taut canvasses	TR706	D. GUICHARD
Introduction to parametrical modelization	TR707	F. GUÉNA
Drawing in the city	TR708	B. SEGERS
Mastering Archicad	TR709	D. BEAUTEMS
Pages to think with and not get lost	TR710	S. NAVA

### Semester 9 (Fall semester - 5th year)

[Click on a course to see the description](#)

M.9.7 – Project			
FIELD OF STUDY	CODE	GROUP	TEACHERS
HMU Living in urban worlds	P901	<b>From situations of use to project situations. Participative urbanism and architectural conception</b>	B. WEBER, V. MOIMAS, J. ZETLAOUI
	P902	<b>Detours II – Yangon workshops</b>	O. BOUCHERON, C. BLANCOT
	P903	<b>Forms of peri-urban fabric and residential projects in the Paris area.</b>	G. GRIBÉ, A.G. COHEN, V. LAVERGNE, P. CHAVANES
	P904	<b>Heritages/s and change: rehabilitating an eco-neighbourhood : Repurposing</b> <i>[to be completed]</i>	P. DEHAN, L. PENISSON
	P906	<b>Action in the heart of the city : Cherbourg en Cotentin</b>	K. NOUSIAINEN, A. PORTNOÏ
	P915	<b>Architecture of collective housing: thinking and building the transition</b>	P. BELIN, J. VINÇON
AS Arts and Scénography	P905	<b>Scenography and architecture: from the work of art to space</b>	M. MAZLOUMAN, J. GAUTEL, M. DESSARDO, G. GRIBÉ
MTP Architecture of Milieux, Territories, Landscapes	P907	<b>Getting to know Indian cities: what will become of the city of ‘little nothings’?</b>	C. SECCI, C. LANOIX, H. THOMAS
	P908	<b>Landscape/S - Architecture, Cities and territories in transition.</b>	A. LAPASSAT, M. HOESSLER
	P909	<b>Constructing urbanity in areas exposed to natural risks</b>	E. DANIEL-LACOMBE, Y. GOURVIL
IEHM Inventing within the existing: Heritage and change	P910	<b>Sustainable rehabilitation on the scale of the city and the building Re-use of industrial building</b>	M. LOPEZ DIAZ, J. BRUTER
	P911	<b>Raising and restructuring of the ordinary residential heritage</b>	O. CHASLIN
	P912	<b>Transformation(s)</b>	M. DUJON, G. PONTOIZEAU
CCA Conceive and Construct architecture: history, theory, criticism	P913	<b>Urban project and European cities</b>	F. GUÉNA, E. LOCICERO
	P914	<b>Architecture, Rehabilitation, Transformation</b>	F. GAUBIN, V. POIRIER

### Semester 9 (Fall semester - 5th year)

[Click on a course to see the description](#)

#### M.9.8 – Philosophy or Sociology

GROUP	CODE	TEACHERS
<b>Sociology: Inheriting the City - For an Anthropological Approach to Time and Urban Temporalities</b>	SH901	A. DE BIASE, P. ZANINI
<b>Philosophy: Philosophical foundations of 'neuro-architecture': towards a new architectural theory?</b>	PH901	A. TUSCHER
<b>Philosophy: Analogy, a genealogy of the project</b>	PH902	J. JAUPITRE

#### M.9.9 – Construction

GROUP	CODE	TEACHERS
<b>Fire regulation/project economics</b>	CTA901	C. SOURTCHEVA KIROV, F. GAUBIN
<b>Life-cycle analysis/interventions on existing assets</b>	CTA902	V. POIRIER

#### M.9.9 – Ecological transition

GROUP	CODE	TEACHERS
<b>Ecology in debate</b>	TEC901	P. HILAIRE

#### M.9.9 – Urbanism law

GROUP	CODE	TEACHERS
<b>Urbanism law</b>	DU901	A. D'ORAZIO

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Code: **L.5.17 PA01**  
 Teachers: Y. NUSSAUME, A. SAUBOT

**ECTS credits :** 12  
 Number of weeks : 15  
 Nber of hours / semester : 105  
 Personal work : 121

**PROJECT - URBAN HOUSING ARCHITECTURE  
 SUSTAINABLE TERRITORY: ARCHITECTURAL,  
 LANDSCAPE AND ENVIRONMENTAL QUALITIES**

**OBJECTIVES**

Following the acceleration of climate change, it is essential to strengthen long-term decisions for sustainable development of territories. To create a territorial web of «quality», it is necessary to “think” architecture in relation to the landscape surrounding it and to reconsider, on various scales, the role of the substrates (geographical, historical, symbolic, social ...) on which it settles, without neglecting the perceptions and social practices of groups that inhabit this built environment.

Taking into account the poetic dimension of architecture, the aim of this project group will be to lead the students to a reflexion on the establishment of a «green» public housing program in a changing urban fabric. At the end of the semester, students will have enhanced their knowledge of this type of programme, and developed expertise in the transformation of this type of building and the concept of living (changes in habits and practices, importance of cultures and different lifestyles, influence of the “milieu”) confronted with environmental needs. Students will also be able to identify the interdependence of areas of landscape, architecture and urbanism.

**CONTENT**

Students will design their buildings by entering them into a logic of densification while introducing an «eco-district» in an existing fabric chosen by the teachers. After an explanation of the issues brought up by the territory, they will begin by doing objective analysis and sensitive readings. Following results of such analysis, they will define density, access, circulation in relation to existing urban landscapes (urban shapes, green frame ...) of their program. The ensemble will be mobilised in a search for efficiency and optimum land management by limiting car use and promoting public transportation. The design of collective habitat will take into account different scales such as blocks or neighborhoods. The students should also take into consideration the scale of private and public areas (sidewalks, playgrounds, parking lots, roads, shared gardens...) surrounding the buildings. Thinking of buildings that respect the principles of sustainable development does not limit the discussion to simple regulatory logic (thermal performances ...), techniques (skins, ventilation, energy intake) or typological issues. The students will question the sensitive dimension, the qualities of spaces (light, functions, accessibility for all), the well-being of users, orientations and shapes of volumes as well as the mix of programs. They will also examine the manufacturing process of the city itself, as well as the building process: citizen participation, multi-criteria analysis, manufacture of the building (craftsmen, materials ...)

**ORGANISATION**

Two complementary types of exercises will be required during the semester :

- An analysis associated with research on the changing ways of living, specifically the emergence of participatory urban dwellings (also called self-promotion group housing).
- The design of a collective housing project itself, in connection with redevelopment of an existing urban landscape.

The analytical work will aim to give some fundamental knowledge and culture to students on sustainable housing in different environments.

At the same time, they will have to study a block or more in a contemporary eco-district in selected countries. For each project or project group, they will have to analyse: the social and cultural context, and the design process compared to the neighborhood and landscape (density, location, private and public spaces, access ...) typologies, assembly «figure» and the constructive system (structure, envelope ...), fluid handling and external energy inputs ...

The design of group housing project and the new design of the surrounding urban landscape will be carried out in two stages.

In groups and in connection with the administrative services of the city and local organisations, they will

../..

*Code:* **L.5.17 PA01**

*Teachers:* Y. NUSSAUME, A. SAUBOT

have

to take into account technical requirements (cleaning up pollution...), neighbourhood needs, expectations and demands of residents on a former industrial or military wasteland, urban and landscape linkages, programme, cutting of plots, construction of buildings (programme, diversity, access ...). To do this part of the work, they will conduct objective and sensitive analysis.

Then they will have to choose one of the buildings and design it while questioning the manufacturing process of the building.

**ASSESSMENT** Continuous evaluation

**Code:** L.5.17 PA02  
**Teachers:** T. ELEFTERIOU, P. MARTIN

**ECTS credits :** 12  
 Number of weeks : 15  
 Nber of hours / semester : 105  
 Personal work : 121

**PROJECT - URBAN HOUSING ARCHITECTURE**  
**ARCHITECTURE OF BUILDING**

**OBJECTIVES**

The objective of this course is to enable students to design a collective housing project in an already constituted and complex urban fabric, while promoting acquisition of the conception and understanding tools of an architectural culture centering on questions of collective housing design and its relationship to the city.

**CONTENT**

The course is offered weekly and in two phases: the beginning of the morning is dedicated to the courses, analysis work, presentations and visits, the rest of the day to exercise correction and supervision of projects. The morning sessions will provide, through analysis work carried out by students and the courses given by teachers, the tools and knowledge necessary to create a collective housing project. The main subjects dealt with are: the question of collective housing and its appearance, typologies, assemblages, distributive and constructional modes, housing components and their uses, transition spaces from public to private, external extensions to housing, orientations and views, building tectonics and openings, etc. Afternoon sessions are dedicated to the project work. Two or three exercises mark the pace of the semester and will enable us to take up, progressively, the question of collective housing as a continuation from the teaching in the second year.

This approach explores the question of dwellings as means of inhabiting the city and favours work on all scales, from the project site (landscape, city, neighbourhood, plot, etc.) to each component of the housing. The project work relies on the simultaneity of a volumetric work adapted and integrated into the existing context and setting up a way of living (typologies, assemblages, interior qualities of housing). This means becoming aware of the potentials of a site through its views, limits, topography, orientation and taking the best possible advantage of this specific urban situation, exploring typologies and scales within this context. The idea is to work on the housing project as a constitutive element in an urban sequence, to approach the project as the articulation and interaction of appropriate scales and to aim at coherence between typology, distribution and constructive mode.

This work will be carried out through constant back-and-forth between different scales of representation (from 1/500 to 1/50, even 1/20) and different tools (plans, maquettes, drawings, perspectives). These changes of scale enable us to work on the global project right into the inside of the dwelling without ever losing sight of the project as an ensemble and the relationship with the context.

The whole issue of living in the city today is explored in all its aspects, from possible and acceptable density to urban quality, the development of lifeways and environmental aspects.

**ORGANISATION**

Organisation of the semester will alternate between group and individual work. Projects will be handed in according to instructions given in the course and through texts, sketches, plans, cross-sections, perspectives, study maquettes, etc.  
 A maquette of the site of the last exercise will be done as group work.

**ASSESSMENT**

Continuous assessment, weekly presentation of work in the course. Intermediate assignments and final assignment

**LANGUAGE**

Course language: French  
 Communication languages: French



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*Code:* **L.5.17 PA03**  
*Teachers:* B. GAUDIN, P. BOUVIER

**ECTS credits :** 12  
Number of weeks : 15  
Nber of hours / semester : 105  
Personal work : 121

## **PROJECT - URBAN HOUSING ARCHITECTURE**

### **ARCHITECTURE OF BUILDING**

#### **OBJECTIVES**

The objective of this course is to provide students with conceptual tools and architectural culture concentrating on the issue of a collective housing project in an already constituted urban site.

#### **CONTENT**

The broadest possible approach is developed in order to establish a relationship between the various scales of the project, from the city to the site in question and on to the dwelling itself and even the individual rooms that make it up. Hence, the question of collective housing is broached as a way of living in the city. The project will develop through successive phases alternating exercises and overall formatting. Intermediate exercises will enable students to grasp the particular topics in a more theoretical manner (density, land scales, typologies, distributive modes, common spaces of the dwelling?). A single project is developed over the semester, to be given a final unified format and made up from the different preceding analytical phases. In parallel, in addition to following students' work, the teachers give a morning course series throughout the semester in relation with the development of the project: trajectory of Paris streets; distributive systems for the city and the building with their evolution and influence on urban form ; facades : composition, expression. Visits are also organised regularly during the semester.

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*Code:* **L.5.17 PA04**  
*Teachers:* V. CORNU, D. AFANASSIEFF

**ECTS credits :** 12  
Number of weeks : 15  
Nber of hours / semester : 105  
Personal work : 121

## **PROJECT - URBAN HOUSING ARCHITECTURE ARCHITECTURAL PROJECT**

### **OBJECTIVES**

The objective of this course is to provide students with conceptual tools and architectural culture concentrating on the issue of a collective housing project in an already constituted urban site.

### **CONTENT**

The broadest possible approach is developed in order to establish a relationship between the various scales of the project, from the city to the site in question and on to the dwelling itself and even the individual rooms that make it up. Hence, the question of collective housing is broached as a way of living in the city. The project will develop through successive phases alternating exercises and overall formatting. Intermediate exercises will enable students to grasp the particular topics in a more theoretical manner (density, land scales, typologies, distributive modes, common spaces of the dwelling?). A single project is developed over the semester, to be given a final unified format and made up from the different preceding analytical phases. In parallel, in addition to following students' work, the teachers give a morning course series throughout the semester in relation with the development of the project: trajectory of Paris streets; distributive systems for the city and the building with their evolution and influence on urban form ; facades : composition, expression. Visits are also organised regularly during the semester.

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**Code:** L.5.17 PA05  
**Teachers:** M. BOTINEAU, N. FÉVRIER

**ECTS credits :** 12  
**Number of weeks :** 15  
**Nber of hours / semester :** 105  
**Personal work :** 121

## **PROJECT - URBAN HOUSING ARCHITECTURE**

### **ARCHITECTURAL PROJECT**

- OBJECTIVES** The objective of this project workshop is to continue and deepen the acquisition of the fundamentals of the design and representation of the architectural project. The course proposes an exploratory approach and will be an opportunity to carry out a project focused on the issue of collective housing in urban sites
- CONTENT** Analytical work is proposed at the beginning of the semester and conducted at the same time as the short exercises. It focuses on references from the history of housing architecture that can then serve as a trigger for the final project. The purpose of this preparatory work is to install a critical distance and to put into perspective the issues related to the design, in the approach of the project. A regular viewing of conferences as well as the reading of theoretical writings on housing will complete the work of analysis, aimed at the acquisition of a culture shared by the workshop.
- The proposed teaching will introduce and integrate during some reflections on contemporary issues (social, economic, environmental,...) by questioning diverse subjects :typological diversity, the evolution of lifestyles and the current diversity of ways of «living”, flexibility and adaptability, the need to re-examine standards to allow experimentation and innovation , the economy of means, materiality, a strong but «desirable» density (proximity without promiscuity), the pooling of spaces, shared uses and the relationship to nature.
- ORGANISATION** The teaching combines workshop courses on theoretical issues articulated with project work, with directed presentations from students, as well as text commentary and TD sessions on exercise formatting techniques. At each session: presentation of the progress with sketches, models, drawings  
 Notebook A3 collecting all the history of the work and presentation of the totality of the work carried out in models during the semester.
- ASSESSMENT** Analysis / Short exercises / Final project  
 Attendance and weekly presentation (posting) mandatory.  
 The corrections are regular, the follow-up and the evolution of each one is ensured within the framework of presentations, shared corrections and individual corrections.  
 Particular attention is paid to the oral and written expression of students around their exercises and the research they are led to undertake to achieve them.
- LANGUAGE** Language of the course and communication: French

Code: **L.5.17 PAo6**

Teachers: P. HOFTSEIN

**ECTS credits : 12**

Number of weeks : 15

Nber of hours / semester : 105

Personal work : 121

## **PROJECT - URBAN HOUSING ARCHITECTURE**

### **ARCHITECTURAL PROJECT**

#### **OBJECTIVES**

Housing is currently encumbered by a plethora of energy regulations, standards and other requirements. These new, sometimes paradoxical rules concern thicknesses, materials and products, calculations and formulas, but seem to be rarely concerned with the quality of housing, its organization and form.

It is necessary to be more and more technically efficient. So be it!

But the space of the dwelling, its use, its surface and its light do not seem to be at the heart of the debates. On the other hand, the result concerning its energy consumption is a real issue.

This culture of results starts early, for example at school: you learn prowess, success through speed and competition. All of this is reflected in a certain vision of the world, a world that is now subject to rating agencies that award, as if they were at the top of their class, solvency medals to companies as well as to nations, the latter then comparable to more or less prosperous firms.

Housing is no exception to this rating culture. Evaluated according to performance criteria, obeying calculations and indices, it becomes a product within a market, and we forget that it is first and foremost a Project.

The different forms of housing have long constituted a projectual terrain of great richness based on typological studies on the interior space, but also on the exterior spaces, which we call by default «related spaces»: courtyards, corridors, halls, common and shared spaces, staircases, roofs (the latter having the possibility of offering a new floor for everyone and not stupidly «a fifth façade»).

The space of the dwelling is thus also formed and extended by what unites and separates it from its neighbours, a space in which one does not live but which one lives outside the limits of one's own dwelling, without which there would be no distance, no opening to the other and to the world. The «external» places of the dwelling are empty but not emptied spaces that can be shared by all, built so that the city is present outside and inside.

The best housing projects, whether built or not, have always demonstrated that living is also an extension of living at home. Living in your apartment is also living in your neighbourhood, sharing your place and time instead of withdrawing into yourself, in front of your screen, far from the world.

Let us remember this conference in the summer of 1990 during which Jean Dubuisson presented the plans for the 'Shape Village' project built in 1952 in Saint-Germain-en-Laye. Dubuisson described his plans, showed transparencies and, above all, defended the idea of the 'extra room', a space open onto the living room where 'madame could do her sewing'. A good half of the room had booed him, probably in a feminist impulse that remained blind to the possibility that an ideal housing plan could offer: a space in addition.

Have we become uneducated so that we do not remember that the foundation of every project is the ordinary and that its mission is to raise it to a higher dimension, to 'poetize' it? Have we lost the duty to think that a house is a palace and that it must be built for everyone?

Housing and its projects are inscribed in our culture, but also in the language: Several of them have names that alone evoke the richness of the program: the US-onian houses where 'US' meant both a minimum dwelling for America, but also a dwelling for 'US', 'We'.

This is also the case of the paradoxically stated project of «villa buildings» par excellence, where two opposite typologies come together and rub shoulders above ground in a totally homogenous and controlled whole

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Code: **L.5.17 PA06**

Teachers: P. HOFTSEIN

where home and garden build a reciprocity.

It is not a question here of melancholy about fixed, old, obsolete diagrams that are stored in these architects' cardboard boxes, which some wish to mummify in order to mummify them. Far from any nostalgia, we prefer to continue digging into these possibilities nestled in language and culture.

We favour this research rather than blindly submitting to labels such as «zero energy district», «ecovillage», «mixed», «density» - phrases that belong to the language of elected officials and professionals who speak the language of the Market, the one we call «communication».

Beyond images and diktats, we have the task of defending housing and its space, of building it with ambition in order to continue to include it in the culture of a «High Living».

Our L3 project group is based on the familiar typologies of housing: crossing, angled, mono-oriented, duplex, strip, courtyard, etc.

These and other typologies are studied to demonstrate that one cannot project without the knowledge, manipulation and transformation of the type and its imaginative possibility to design and build the city.

And in order to transform, it is necessary to have recourse to the world and culture :

«All the work consists in saying the what via the how. All the work consists in saying the what via the how,» writes Christian DEVILLERS in his text on history and architectural analysis.

For architectural analysis boils down to this: understanding in order to do, projecting in order to think.

We will formulate here the hypothesis that housing draws an interiority, a spatiality, but that it also has the ambition to draw its approach, its neighbourhood, to project the city, to reveal its landscape and its horizon: it is necessary to lean back to project, to understand that a view is not a simple frame, but a selection on the horizon.

Each student positions himself on what he reveals but also on what he hides, on what he chooses, because the learning of the project is enriched by what we want to distinguish and not by what we have to show everything.

In the same way, the terms 'bar' or 'tower' seem to us to be obsolete and moribund terms that do not open up to any formal possibilities.

We prefer the linear form or the vertical series, not to change the words but to understand that they are pretexts for spatializing the housing and its assembly device.

Whether compact or dense, housing does not require that it be slimmed down, amputated, deprived of continuities and transparencies, of balconies and terraces, of places to do «nothing», that the city be forbidden to be its horizon.

We do not reject standards. But they are not enough to define what a Project is.

Standards are not pitfalls. They must, at the very least, become springboards for ideas so that the student can find his way to the game of his choices.

We will quote this sentence from our dear Irish friends, the Grafton Architects:

«Architecture is not about invention, but about intention. »

And the intention, must come from oneself, from one's desire to live before being able to house oneself.

Urban quality is a subject, housing is the Project.

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Code: **L.5.17 PA06**

Teachers: P. HOFTSEIN

### CONTENT

Site: La Cité Descartes :

A centre of excellence in Greater Paris, it concentrates a quarter of French R&D devoted to the sustainable city. Created in 1983 in the communes of Champs-sur-Marne and Noisy-le-Grand, it is home to several grandes écoles such as the Ponts et Chaussées, ESIEE, the School of Architecture of the City and Territories, the Paris School of Urban Planning and 350 companies.

The urban project (840,000m<sup>2</sup>) provides for the construction of housing, offices, shops, services and public facilities. The players aim to create a low carbon footprint district. Eventually lines 11, 15 and 16 will be interconnected to the RER A at Noisy-Champs station, which will become the most important interconnection station of the Grand Paris express.

Project: Vertical building

### ASSESSMENT

- Continuous Work :

The progress of any project is conditioned by constant and continuous production.

At the end of each week, a list of documents is given to all the students in the group.

This list constitutes the details of the compulsory work assigned for the following week.

- Notebook A3 :

In addition to the weekly production, each student must make up an A3 notebook, Italian style, which will contain all the documents produced for each project: perspective and axonometric sketches, photos of study models, diagrams, plans, cuts, elevations, notes, collages, etc...

This notebook will be evaluated every week, and handed in at the end of each project for scoring and evaluation.

**Code:** L.5.17 PA07  
**Teachers:** J. MARIN, S. MAHE

**ECTS credits :** 12  
**Number of weeks :** 15  
**Nber of hours / semester :** 105  
**Personal work :** 121

**PROJECT - URBAN HOUSING ARCHITECTURE**  
**ARCHITECTURE OF BUILDING**

**OBJECTIVES**

Development of a collective dwelling project involving extension/rehabilitation of an existing building. Raising or extending are among the solutions to densify the urban fabric, so we need to understand what is at stake in this particular sort of project, to highlight the opportunities provided for existing buildings and to emphasize the relations that are thus woven between two temporally distinct constructions. This workshop project will involve learning how to “read” a built site, distinguishing the historic, heritage and cultural aspects, finding the elements to base projections on, including the issue of sustainable development, exploring the notion of economy of means.

**CONTENT**

Project consisting of extending/raising existing buildings.  
 Surveying and analyzing sites with one or several building groups as regards their essential components: morphology, typology, composition, structure.  
 Evaluating reuse potentials on the basis of reasoned choices, definitions of strategies and confrontation/ experimentation with the dwelling programme in a specific place.  
 On the basis of surface area and spaces available in existing buildings, opening up to alternative residential programmes such as participative dwellings

**WORK REQUIRED**

In parallel to the architectural and urban project, the workshop will propose exercises enabling students to enrich their thinking and orient their approaches. These exercises will apply to dwellings, buildings in the city and intervention on existing structures, according to the examples chosen for the workshop project.

Type 1 exercise: analytical work on transformed buildings  
 On the basis of examples chosen according to the dimensions of the programmes, the complexity of architectural composition and above all accessibility to documentary sources, the workshop will carry out an analysis to identify the composition principles forming the origins of various extension or reconversion projects.

Type 2 exercise: Project on one-time intervention in existing building  
 Conceiving a one-time intervention with a specific constraint for a given building (creating or modifying an opening, modifying layout, creating an additional floor, fluid integration)

Type 3 exercise: Using a constructive or metrical survey  
 Archival research, finding old traces, modifying uses and layouts, regularisations, structural underpinnings – all these are among the elements that will be identified in order to understand the “transformation cycles of a building”.

Type 4 exercise: Exploring the potentials of a building or part of a building as regards their bearing capacities, constructive systems, present rules and regulations...

Type 5 exercise: visiting dwelling programme operations under way or finished and producing/presenting reports on those visits.

Type 6 exercise: exploring principles of grouping, sequences of public/private transition, inside/outside relationships, spatial hierarchies.

Type 7 exercise: use qualities and environmental performance.  
 Practicing pluridisciplinarity in the framework of the project teaching and intervention of the teachers from other disciplines (forms of dwelling/history and genealogy, living languages, construction, ambiance, constructive analysis, computer-generated representation of project, history of modern and contemporary architecture, plastic approaches)  
 Evaluation criteria: capacity to link knowledge fields, practices and disciplines taught, capacity to present and provide arguments for a project and produce a critical opinion, capacity for group participation in elaborating a common project.

**Code:** L.5.17 PA09  
**Teachers:** V. PIGNOT, P. FARRET

**ECTS credits :** 12  
 Number of weeks : 15  
 Nber of hours / semester : 105  
 Personal work : 121

## **PROJECT - URBAN HOUSING ARCHITECTURE**

### **ARCHITECTURAL PROJECT**

#### **OBJECTIVES**

This course aims at providing students with an architectural culture and the conception tools to understand the subject of accommodation and housing in an urban milieu.

- Learning to design collective housing in a particular urban milieu on the basis of its specifics and setting up links between the site characteristics, distributive modes, lay-out of housing and indoor organization.
- Acquiring an architectural culture on collective housing
- Knowing how to analyze a corpus of references and reactivate it for the project
- Know about and read the theoretical writing on housing

#### **CONTENT**

Following up on Semester 3 and activating the knowledge acquired, this course highlights the necessary correspondences between housing, the neighbourhood and the city so that the accommodation will be inhabitable within its context. On the basis of an exhaustive architectural culture on the subject of housing, the sites chosen in the Parisian metropolis will enable students to explore various urban fabrics and see how they can enrich design of housing in its morphology, distributive modes or the typologies utilized.

The project will be carried out in successive phases with exercises in parallel enabling students to decompose and work through specific questions such as distributive modes, lay-out of housing, indoor organization, to lend depth not only to their inter-relation, but also their relationship with the neighbourhood the building is set in. Theoretical resources and in situ visits will enrich the process of elaborating the project.

This year, we will be interested in three questions:

The question of place: we will work on the 'laniéré' fabric of the Bas Montreuil, which has narrow and very deep plots, an old fabric of small industries and crafts. How can the particularity of this fabric inspire us to create special living conditions?

The question of typological diversity: As A. Hofer, architect of the Zurich Krafwerk cooperative, would say, 'standardisation is the greatest risk, it is the diversity and complexity that are adapted for our changing world' in order to be able to respond to different ways of living.

The question of shared spaces: Following the example of the Krafwerk cooperative and other examples from the history of architecture, how can we think about shared spaces that are more than just the stairwell?

Method: the project group will work in the image of a cooperative: sharing knowledge of a territory and experimentation with living spaces, debates. Alternating moments of analysis and project. Alternating collective and individual work.

#### **ASSESSMENT**

Continuous assessment

#### **LANGUAGE**

Teaching language: French  
 Communication language: French



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**Code:** L.5.17 PA10

**Teachers:** D. HENRY, D. DEHOUX

**ECTS credits :** 12

Number of weeks : 15

Nber of hours / semester : 105

Personal work : 121

## **PROJECT - URBAN HOUSING ARCHITECTURE**

### **ARCHITECTURAL PROJECT**

#### **OBJECTIVES**

The objective is to learn to make a realistic dwelling project within a dense urban context by articulating several scales, mastering all the components involved (dimensioning, typologies, assemblages, uses...) and constraints (contextual, structural, regulations), as well as learning to formulate a coherent intellectual approach matched with the project needs.

#### **CONTENT**

The main exercise of the semester will address a project for some forty social housing units in Paris or its first ring of suburbs. The site(s) proposed will be of some complexity, transverse or at an angle, heterogenous plot fabric, sloping site.

The idea is to work on the project as a key element in urban articulation and lead students to question their project through various scales (landscape, city, neighbourhood, plot, building, dwelling and all that makes it up) through an apprenticeship of adapted graphic representations. The objective is always to maintain a global project vision and conceive of the building not as a formal object but as the crystallization of interior and exterior architectural intentions.

The project will thus be elaborated mainly through the simultaneous tasks of implementing a way of living (typologies, assemblages) and a volumetric response adapted to the existing context. Dwelling quality will be sought after through multiple orientation, light, views, spatial dilations, inhabitability, exterior extensions, etc.

Morning sessions will provide the tools and knowledge needed for dwelling projects. Main themes dealt with: typologies, distributions and assemblages, weft and constructive structures, dwelling and use components, itineraries and sequences from public to private, orientations, views, framing and filtering, exterior extensions of the dwelling, ground floor and relation to ground level, roof and relation to sky... Intermediate exercises will enable students to assimilate these subjects. Site visits, projections and notable typology studies will complete this course programme.

Weekly course. Beginning of morning session for courses and students' presentations, rest of day for correcting exercises and following projects. All organized in a collegial way. Professors from other disciplines will participate (structure, geography, sociology) in different stages of the project.

#### **ASSESSMENT**

Continuous control of notebook including thinking, documents, sketches, writing. Weekly presentation of work-in-progress. Attendance of all courses obligatory. Intermediate and final work to be handed in.

#### **WORK REQUIRED**

Group maquette of site. Individual project in sketches, plans, cross-sections, perspectives, study maquette...

#### **LANGUAGE**

Course language: French

Communication languages: French, English

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Code: **L.5.17 PA11**

Teachers: J. POMMIER, E. ROBIC

**ECTS credits : 12**

Number of weeks : 15

Nber of hours / semester : 105

Personal work : 121

## **PROJECT - URBAN HOUSING ARCHITECTURE**

### **COLLECTIVE HOUSING, URBANITY, INTIMACY, CONSTRUCTABILITY**

#### **OBJECTIVES**

The objective of this course is to transmit an architectural culture and design tools on the theme of housing in urban areas. The targeted skills are developed at several levels, from analysis to design:

- Analyze an urban environment and design an architectural ensemble that responds to it.
- Analyze a corpus of theoretical and constructed references, and reactivate it in the project.
- Design collective housing in urban situations, from distribution to interior layout.
- Build a coherent project approach at all scales.

#### **CONTENT**

To address these questions, the semester will be organized in three phases: urbanity, intimacy, constructibility. This gradual entry into the theme will allow the questions and scales to be gradually articulated, from 1/500th to 1/50th. The challenge will be to build a coherent approach linking housing and the city, at all scales. At each of these phases, a diversity of tools and concepts will be mobilized, including: urban fabric and density, regulation and integration, typology and distribution system, layout, comfort and versatility.

#### **ORGANISATION**

The sessions will alternate between collective and individual work, in situ visits and analysis sessions, presentations, debates and project monitoring sessions. A place will be given to mutual criticism between students: as the Bachelor 3 is a pivotal year towards the master's degree, the project group is conceived as a place of sharing and mutual enrichment, where students are initiated to critical autonomy.

#### **ASSESSMENT**

Ongoing monitoring. Intermediate renderings and final rendering.

#### **LANGUAGE**

Language of the course and communication: French.

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*Code:* **L.5.17 PA12**

*Teachers:* O. CHASLIN, S. BOURLIS

**ECTS credits :** 12

Number of weeks : 15

Nber of hours / semester : 105

Personal work : 121

## **PROJECT - URBAN HOUSING ARCHITECTURE HOUSING, BETWEEN INVENTION AND CONSTRAINT**

### **OBJECTIVES**

Confronting the architect's desire to invent with the reality of external givens, in order to define priorities and challenges in the project in the context of a constrained world.

### **CONTENT**

Study external constraints, whether they result from :

- Conventions
- Programmatic givens
- Topography
- Urban or climate context
- Construction methods,
- Regulatory or normative givens
- Etc.

Learn to appreciate their pertinence, place them in the context of study of modern typologies, analyse their impact on the internal dynamics of the project

### **WORK REQUIRED**

The day's work will alternate between presentations and analyses, on the one hand, and the architecture project on the other

Lectures: interventions:

In the framework of the course "History of group housing architecture", half-day Tuesday, to be coordinated with the other participants

Can be centered on group housing in Nordic countries, as linked with the 'new empiricism' in Scandinavian modernity

Group tutorials.

### **ASSESSMENT**

Presentations and analyses (carried out by small groups of 3 or 4 students) will be assessed, as well as the projects done individually.

Code: **L5.17 CT**

Teachers: V. PIGNOT

**ECTS credits : 2**

Number of weeks : 13

Nber of hours / semester : 19,5

Personal work : 22

## **ARCHITECTURE THEORY - COLLECTIVE HOUSING**

### **OBJECTIVES**

- Acquire knowledge on the theme of collective housing in order to design with the help of a theoretical and practical body of knowledge
- To know how to describe and analyse all the components that make up exemplary collective housing from the beginning of the 19th century to the present day in order to be able to draw inspiration from them and use them in the design process.
- To know the historical, geographical and cultural conditions of the emergence of these achievements.

### **CONTENT**

This course is a cross-cutting theory course articulated to the project groups of semester 5 dealing with the issue of collective housing in urban areas.

Since the end of the 18th century, with the beginning of industrialisation, the problem of collective housing has been crucially raised in all major European cities. Architects then took up this same question, which is still relevant today: how to solve this difficult equation: to house the largest possible number of people in a decent way and create the conditions that will allow them to «live». How to improve human living conditions. These architects have written texts (Theory) and built collective housing buildings that constitute a theoretical and practical legacy on which contemporary projects could or should be based. The course is structured chronologically from the beginning of the 19th century to the present day, updating the influences and debates between the different European countries, as well as the cultural, historical and geographical peculiarities and specificities of the conditions of emergence of these achievements. The reading of the evolution of the notions of use, comfort and intimacy will reveal the changes in lifestyles and their translations in the space of these dwellings.

Through the analysis of this corpus, we will re-examine the design questions that every architect asks himself when he designs collective housing: the question of urban form and typology, of the inscription of the building in the fabric of the city, the question of external or internal collective spaces, the question of the distribution and layout of housing, the question of the internal organization of housing and its relationship to the environment without forgetting that of construction methods.

The scope of this course is meant to be pragmatic, i.e. oriented towards the action of design: the analysis of these works can provide us with answers to the questions we are asking ourselves today: how to design or rehabilitate buildings that allow us to «live in» at a time of global warming, migratory crises and pandemics. Do they provide us with answers? on the urban figures of the density and balance to be found with the presence of nature, on adaptability to different lifestyles, on shared spaces, on construction methods and those of passive energy.

### **ASSESSMENT**

Examination at the end of the semester: analysis, comparison and re-contextualization of two multi-family housing projects from different periods.

Students who did not show up for this first session will not be able to take the make-up exam.

### **WORK REQUIRED**

note-taking during the course, deepening by reading books from the bibliography

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*Code:* **L5.18 SCo1-02**

*Teachers:* F. GAUBIN, L. BERGER

**ECTS credits :** 2

Number of weeks : 13

Nber of hours / semester : 26

Personal work : 22

## **STRUCTURE / CONSTRUCTION**

### **OBJECTIVES**

The more general objective is to develop the students' technical culture with a view to a real constructive mastery of the project. It must be a place for the synthesis of the teachings already given in the discipline.

### **CONTENT**

The course will focus on presenting the most common constructive typologies and their respective qualities in terms of production and implementation, performance. It will also provide the tools for the dimensioning of the main works.

### **ASSESSMENT**

Written exam 100%

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Code: **L5.18 AM**

Teachers: N. BELKADI, M. LOPEZ-DIAZ

**ECTS credits : 2**

Number of weeks : 13

Nber of hours / semester : 26

Personal work : 22

## **ATMOSPHERES**

### **OBJECTIVES**

This course aims at completing the teaching offered during the preceding semesters on notions linked to hygrothermal comfort and to air quality. It will help students understand the parameters applying to thermal comfort and their impact on the project to enable a real mastery of ambiances and develop students' technical culture needed for a real constructive mastery of the project.

### **CONTENT**

Recall notions of heat exchange, envelope insulation, hygrothermal comfort, air humidity and ventilation, envelope-level condensations.

### **WORK REQUIRED**

The course consists of lectures

### **ASSESSMENT**

Partial and final examinations

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Code: **L5.19 SHO1**

Teachers: E. MACAIRE

**ECTS credits : 2**

Number of weeks : 13

Nber of hours / semester : 19,5

Personal work : 22

## HUMAN SCIENCES

### THE ARCHITECT AND HIS PARTNERS IN THE PROJECT PROCESS

**OBJECTIVES** The course aims to familiarize students with the main issues of the architect's professional practice, and to question the position he or she occupies in the processes of manufacturing and transformation of the city.

**CONTENT** Through associating theoretical teaching and practical work, different scales and aspects of architectural production will be mobilized and articulated around three macro-themes:

- In a first phase, we will examine the scale of the city and the architecture project: who are the actors that take part in "making" it? How are they organized and what rules are imposed upon them? What is an architect's place in the various organizations and processes of the project?
- The second phase will deal more specifically with how the professional field of architecture is structured as well as with the genealogy of trades and diversification of professions connected with it.
- Understanding these "fundamentals" will enable us to take up, in the third phase, the question of actors, presenting in greater detail certain professional groups (programmist, architecture communities...), processes and dispositives of calls for projects. This will make it possible for students to examine the developments in this role, practice and the profession of architect, as well as in relation to territorial transformation

**ASSESSMENT** The theoretical knowledge acquired will be applied to a case study in which an architectural operation will be "deconstructed" and analyzed on the basis of the various themes dealt with in the course in order to analyze and understand the system of actors involved and to locate the intervention and missions of the architect in the project process.

**WORK REQUIRED** Assessment: class attendance + study case assignment

**BIBLIOGRAPHY** Bibliographical References

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CHADOIN (Olivier). Etre architecte. Les vertus de l'indétermination. Limoges, PULIM, 2006.

COURDURIER (Elisabeth), TAPIE (Guy), Les professions de la maîtrise d'œuvre. Paris, La Documentation Française, 2004.

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RINGON (Gérard). Histoire du métier d'architecte en France. Paris, PUF Que Sais-Je ?, 1998.

Sites internet :

<http://www.architectes.org/connaitre-l-ordre/les-chiffres-de-la-profession> Statistiques de l'Ordre National des Architectes et informations sur la profession.

<http://www.ramau.archi.fr> Informations et ressources émanant du Réseau Activités et Métiers de l'Architecture et de l'Urbanisme (RAMAU).

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**Code:** L5.19 SHo2

**Teachers:** E. AMOUGOU

**ECTS credits :** 2

Number of weeks : 13

Nber of hours / semester : 19,5

Personal work : 22

## HUMAN SCIENCES

### OBJECTIVES

SOCIOLOGY COURSE

Title: Sociology of production of spaces and the field of architecture

Teaching objectives: from a sociological standpoint, this course aims at providing knowledge about the construction of built spaces. The understanding of positions, logics and strategies of architects within the fields of production of spaces is the essential objective of the course.

### CONTENT

Intervention content will be based on theoretical approaches related to the sociology of spaces. These will enable us to analyze the following objects: production of lived-in spaces; social relations and built spaces; the field of architectural production and the stakes involved; urban spaces and urbanity; processes of patrimonialization and construction of urban "identities".

Each of the sessions will involve reading a text (in the form of a research article). Students will read and comment upon during the following class.

### ASSESSMENT

Assessment in two ways: a dissertation and reading notes on one of the texts chosen by the student during the semester.

### WORK REQUIRED

Reminder of viewpoints and sociological approaches to socio-spatial issues.

Lecture-style presentations of themes and/or subjects relevant to the content listed.

Communication sessions on methods of construction and writing reading notes.



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**Code:** L5.19 SHO3

**Teachers:** A. DE BIASE

**ECTS credits :** 2

Number of weeks : 13

Nber of hours / semester : 19,5

Personal work : 22

## HUMAN SCIENCES

### OBJECTIVES

The objectives of the course are to understand an anthropological approach and the relations with the processes of transforming the city, most especially Paris.

### CONTENT

The course proposes to explore the relationship between nature and urban transformation in Paris. Based on anthropological reading on the metropolis, we shall investigate from 1789 on, who are the actors dealing with the city's management and maintenance, what trades and knowhow this gives rise to, to what public they were addressed, which spaces are defined for which practices and what role all this plays in transforming the city. From the post-revolutionary making of nature into a public issue, to nature as the hygienist stakes of the Hausmann period, up to the question of shared gardens in the Delanoé period and on to the collaborative platform of "Vegetalize Paris" for Anne Hidalgo, we shall attempt to understand what narrative nature is made to convey in each stage of transformation and what type of (new) practices this generates.

It will thus be a question of understanding what nature is assigned to convey in each stage of transformation and what type of (new) practices this generates.

In the tutorial sessions, students will 'follow' small territories undergoing change where 'new practices' can be seen (vegetalizing permits, Paris-cultivators, shared gardens...) The stakes involved are to encounter people piloting these projects, understand the role they see nature as playing and what type of urban forms they produce.

### ASSESSMENT

Continuous assessment and final exam.

### WORK REQUIRED

A little ethnography of a Parisian case study.

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Code: **L5.20 RA**

Teachers:

**ECTS credits : 3**

Number of weeks : 13

Nber of hours / semester : 62

Personal work : 33

## **COMPUTER SCIENCE GROUPS**

### **COMPUTER REPRESENTATION OF THE PROJECT**

#### **OBJECTIVES**

This course aims at providing knowledge and skills in creating computer-generated images for the project. These skills will enable students to adapt their work to any of the software programmes they might meet with in the school curriculum and in the course of professional activity.

#### **CONTENT**

The course comprises three parts:

1/ Reminder of 3-D modelisation (volume and surface)

Course content:

Reminder of principles of volume and surface modelisation and how to calculate projections covered in the 2nd year

Group tutorials: modelisation of architectural scenes, objects for future illumination calculations

2/ Light-matter interactions:

Course content:

Types and properties of projections, colours, lights and materials

Algorithmic techniques (possibilities and limits): shading (Gouraud Phong), Ray-tracing, Radiosity, Photon mapping, etc.

#### **ASSESSMENT**

1.30 hours of course followed by 2.30 hours of group tutorial each week

Reminder of 3-D modelisation (3 sessions = 12 hours)

Light-matter interactions (8 sessions = 32 hours)

Image processing and augmented reality (3 sessions = 12 hours)

Half of the class is divided into groups of 20 students.

#### **WORK REQUIRED**

Exercises done in each session and a final dossier

Continuous assessment

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Code: **L5.20 DPO1**

Teachers: A. FREMY

**ECTS credits : 3**

Number of weeks : 13

Nber of hours / semester : 84

Personal work : 33

## **PLASTIC APPROACH**

**OBJECTIVES** Experience, autonomy, pleasure.

**CONTENT** Each student (as a free person) will decide on her/his project (free subject).  
Choosing a subject freely implies giving to and for oneself a certain number of constraints, either given or invented, that make up the stakes involved in the project, whatever it is to be: the time allowed, the evaluation of needs and material means, the place they will be implemented in, taking into account the people it is meant for (spectators, users, inhabitants), etc. Calling these parameters into play (chosen or not) engages mental processes and conceptual and visual tools specific to each project: text, drawing, storyboard, scenario, iconography, reference, etc. Each project will be accompanied by a visual testimony retracing its genesis in the form of a digital book to be put online.

**ORGANISATION** A digital book to be formatted.  
A “finished object”: all media are possible, from textile to writing, including photography, design, painting, etc. This could involve a piece of furniture, a film, clothing, a comic or a sand castle...

**ASSESSMENT** Evaluation of the approach as an ensemble, from the book-witness to the final project.

**LANGUAGE** Course language: French  
Communication languages: French

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Code: **L5.20 DPO2**

Teachers: P. VACHON

ECTS credits : 3

Number of weeks : 13

Nber of hours / semester : 84

Personal work : 33

## PLASTIC APPROACH

### ART AND THE CITY, THE 1% ARTISTIC AND PUBLIC ORDERS

#### OBJECTIVES

Art and the city  
The 1% artistic and public orders

Teaching objectives:

This course refers to an initiative taken by the Popular Front government of Mario Roustan in the Senate and Jean Zay, at that time Minister of National Education, which aimed at sensitizing the public to contemporary art creation. It was in 1951 that the founding decree was made: the 1% artistic. In the 1980s, this was extended to the ensemble of local municipalities including the township, départements and regions which must devote 1% of their investment to putting art works into all new constructions under the new competences attributed through the decentralization laws. In parallel, the government adopted a planning system and urbanization of territory in the 1970s that led to the construction of new towns and these leveraged the rise of art in urban space.

This course will make students aware of this system, which responds to varying objectives, the first being to support artistic creation and promote its spread outside the usual places such as museums.

Photographic observations will be used to examine the works involved as well as how they are set in the urban space, and their dialogue with their environment.

These works create a signal in the city, a point of bearings to its inhabitants and to passers-by.

#### CONTENT

Phases of work:

Students will first look at the work as a whole, that is, its general problematic, its physical aspect, its materiality. A bibliography on the various artists concerned will be given out before the observations carried out on-site. These documents will enable students to avoid focusing only on the work but encourage them to take it in and locate it in the broader approach and the itinerary of the artist.

This will be individual work and students will have to find their own observation and analysis methods for the work chosen, which can involve different lines of research – relations between the work and its environment, the relations of form or colour between a work and its context, etc.

Students may also investigate the way inhabitants perceive the work.

This project will take place on various sites in Paris and its suburbs.

#### ASSESSMENT

Assessment criteria:

Capacity of the students to observe and analyze a work in an urban context (indoors or outdoors) and bring out a personal reading of it through photographic work.

Capacity of the students to work out a line of research that enables them to develop their own approach to a work in urban space.

Structure and organize various elements and events in relation to one another and to the context.

**Code:** L5.20 DPO3

**Teachers:** L. DELARUE

**ECTS credits :** 3

Number of weeks : 13

Nber of hours / semester : 84

Personal work : 33

## PLASTIC APPROACH

### DRAWING AND VOLUMES TO ACT IN SPACE

#### OBJECTIVES

It will be a question of approaching a relation to art, through an object, a construction, an action, to explore the confrontation between volume and space, between decisions and experiences.

We will borrow from reality and questions of representation in order to better escape from it and nourish the imaginary and construct the displacement between the object of reference and the elaboration of a plastic proposal.

#### CONTENT

Through drawing and volume, simultaneously or in combination, one can imagine and construct one or more objects and fictitious spaces by extrapolating the relationship between a place, an object and its use.

The object-sculpture, the body and space, the relationship between forms, their measurements, arrangements, gestures and transformations will be the basis of our reflections and experiences. The work will depend on the materials chosen and brought by the students, the tools of implementation, which guide the gestures of the work and the forms produced.

We will first make drawings and preparatory work, then volumes or installations in space, taking into account questions of scale and volume, or colour through the materials used.

Two different experiments will be proposed successively; one based on reference images chosen from a batch of heterogeneous reproductions of works of art, landscapes, situations or objects spotted in the city, in transport, places of construction or under construction.

Following this work, a proposal will be elaborated taking into account a chosen context, idea and displacement of use, function, materials, and forms. An intuitive and personal perception of the space will be summoned by a displacement and an appropriation of the experiences of the first forms and what they suggest.

We will thus be attentive to the transformations necessary for the implementation of a plastic object, whatever its nature, and to the possible digressions to which these transformations lead us.

#### WORK REQUIRED

Definition of a personal work project and the steps of its realization, in drawing, in volume  
Workshop work, various experiments, personal production and development in space.

Drawings, volumes, photos, according to the progress of the work. Work follow-up notebook.

Personal presentations on a work or an artist, following visits to exhibitions will be requested.

#### ASSESSMENT

continuous assessment, attendance, participation in the course

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Code: **L5.20 DPO6**

Teachers: M. DESSARDO

ECTS credits : 3

Number of weeks : 13

Nber of hours / semester : 84

Personal work : 33

## **PLASTIC APPROACH**

### **REPAIR (VISUAL ARTS AND SCULPTURE)**

#### **OBJECTIVES**

REPAIR (visual arts and sculpture)

This program is an introduction to the praxis of sculpture, video, drawing and photography as parts of a toolbox helping to analyze reality. It aims to explore our environment through concrete forms of language, shaping the very material and flesh of the physical world which is altogether encompassing, supporting, constituting and inspiring us.

#### **CONTENT**

These practices will serve the act to 'fix' that will initially be a harmless occupation related to crafts works or to exercises, such as jogging. This practice will evolve to adapt to most personal or intimate repairs. Then lead us, later on, another level of repairs : urban repairs, landscape repairs, or social or cultural repairs. The starting point being the simple act of trying make something works, just for a while ...

The lesson will be divided into three parts : it will be based on the rules of the game possibly designed collectively on the beginning of each semester.

It is punctuated by visits to contemporary art exhibitions and artist presentations related to the explored topics.

We use these shows as a raw material and starting point.

#### **WORK REQUIRED**

video, drawing, urban sculpture, photography

#### **ASSESSMENT**

Continuous Control 66,6%

Final render 33,3%

#### **LANGUAGE**

English, French, Italian, Spanish languages are welcome

Code: **M.7.1 P701**

Domain: **Inventing within the existing: Heritage and change**

Teachers: D. DEHOUX

**ECTS credits : 11**

Number of weeks : 16

Nber of hours / semester : 112

Nber of hours / week : 7

Personal work : 128

## PROJECT

### HERITAGE REHABILITATION OF BUILDINGS AND TERRITORY

#### OBJECTIVES

Contribute to activating renewal of the reservoir of architectural and urban idle lands in Paris and its periphery, especially in Seine-St-Denis where there are so many industrial brownlands such as the Grands Moulins in Pantin (The Great Mills), the Babcock industrial plants in La Courneuve, the Magasins Généraux in Pantin, the EDF Power Station in Saint-Denis, the Railway Cathedrals and still others.

In Saint-Denis, several sites and programmes will be proposed, mainly involving the “Railway Cathedrals”.

The territory to be analyzed:

- The Plaine Commune: one of the urban communities of Seine-Saint-Denis including 9 towns on the northern outskirts of Paris, including La Courneuve and Saint-Denis.

- The Plaine Commune has been identified as a territory in the ‘Culture of Creation’ among the development poles defined by the ‘Grand Paris Project’.

Proposal:

How to durably anchor architectural and urban production and its history in territories that today should be renewed with meaning, quality of life and long-lasting perspectives.

This is an opportunity to rehabilitate, transform uses, reconvert, re-innovate a heritage and a territory with the palimpsest buildings of our scientific, economic, social and environmental history.

#### CONTENT

The project group will take up the question of the plurality of scales of thinking needed to conceive urbanism and heritage architecture projects.

Work involved:

- Make a diagnosis of a territory and a building
- Take into account the contextual factors of a territory undergoing change
- Engage in a systemic analysis of its development
- Understand the mechanisms, methods and tools to valorize architectural and territorial heritage
- Define a programme emphasizing adaptability to long-term changes, responding to requirements for sustainable development of a high value for the heritage, environmental, economic and social framework of the built environment.

We take into account:

- Transversality in analytical, technical and sensitive approaches
- Pertinence of placing projects in their environment
- Viability of project life cycles as regards the stakes involved in environment, governance, and temporality.
- Technical and functional coherence of architecture projects within the framework of territorial programming

On the basis of the state of the study sites and the territorial management orientations, the group will develop analysis tools enabling us to collectively make a diagnosis and set up a prospective and phased ‘plan-programme’ setting out their proposals for management and their architecture projects.

At every step, we will highlight the principle of precaution as concerns use and resources, risk prevention, protection and preservation of natural or anthropic heritage.

The stakes involved in the project are to lend coherence to the proposals for balanced linkage of mixity and temporality in a plurality of activities: training and education, employment, accommodation, leisure activities, economies, uses and mobilities.

The main emphasis will be on analysis and diagnosis of the pathologies of the territory and its buildings.

Code: **M.7.1 P701**

Teachers: D. DEHOUX

**ASSESSMENT**

Weekly workshop on Friday:

- Site visits, inquiries and surveys of the area
- Presentations, thematic interventions
- Thinking and collective exchange
- Individualized supervision of projects
- Weekly presentation and debate on progress of the studies and the projects

Modality:

1 - Methodologies and tools for analysis, diagnosis, programming and project-making:

a) Sensitive approaches: analysis method that perceives both the built and non-built (A2) territory

b) Comparative critical diagnosis method (A2) and functional thematic analysis

c) Programmatic projection: Corpus of thematic references (A2), textual programme.

d) Project-making through sketches of simulation of intention and temporality (A2)

2- Transversal thematic analysis and diagnoses, group work (A0), FAST (Folio)

3- Programmatic projection: textual circadian and seasonal (A4), relational organigramme

4- Territorial and local plan/programme, phasing (in groups, from 1/10000 to 1/2000 (A0)).

6- Project to manage the site, architectural project and specific details (individual or in twos, from 1/500 to 1/50, graphic documents, 3-D views, maquettes, projection).

Final assignment: presentation panels (A0), maquettes, projections, logbook file, CD.

- Continuous assessment, intermediate evaluation in December with critical feedback, final assignement

**LANGUAGE**

Course language: French

Communication languages: French



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Code: **M.7.1 P702**

Domain: **Inventing within the existing: Heritage and change**

Teachers: M. BOTTINEAU

**ECTS credits : 11**

Number of weeks : 16

Nber of hours / semester : 112

Nber of hours / week : 7

Personal work : 128

## PROJECT

### INVENTING WITHIN THE EXISTING

#### OBJECTIVES

The Earth has only finite resources to take space for and construct human habitation; nonetheless, natural, agricultural land and raw materials are running out. In spite of this, many buildings are still poorly used or quite simply abandoned. Choosing to reuse what already exists and thinking about how to transform this as a stage in the life of a building is one way to respond to this situation.

‘NOTHING IS LOST, NOTHING IS CREATED, EVERYTHING CHANGES’ (1)

Seeing that the objective of the licence degree is to acquire the fundamentals for the architectural project in order to design the heritage of tomorrow, we propose for the project group to inverse the way we look at it by investigating the transformation of heritage in recent times, the heritage of modernity, in order to let it evolve and adapt to new stakes.

Re-use of existing constructions represents a genuine challenge for the 21st-century architect, considering the massive amount of construction from the preceding century: at no time has humankind constructed so much in so short a time.

Abandoned industrial buildings, inadequate public facilities, residential wastelands or neglected commercial zones make up a considerable potential for re-interpretation and re-invention. Our objective is to make do with what modernity left us as a heritage by transforming it to adapt to present-day problematics (territorial, urban, architectural, societal, environmental and programmatic).

Banal heritage and emblematic buildings, the notion of heritage is taken here in its broadest sense.

#### DO BETTER WITH LESS

Re-using the heritage that history has left us by transforming is the very condition underlying its conservation and an opportunity to extend the memory of it and for the city to pursue its sedimentation. It is no longer a question today of wiping the slate clean of buildings that are no longer adequate, but of stepping back from built situations, even the most problematic, to find the right dose between what should be kept, modified and even deconstructed.

Economy of means is at the centre of transformation, and prolonging the life cycle of buildings is one of the seven pillars of the circular economy. Re-using available heritage that has been abandoned or is ill adapted will enable us to construct less by recycling and re-using the structure or the elements of the secondary work to extend the life of existing materials and thus lessen, or at least slow down, consumption and artificialization of land by using real estate that is already occupied and made viable.

From this point on, a building is a resource to be shared and valorized. We are far from the “build more, better and less expensive” promoted by the Elan Law.

The 3R strategy (reduce, re-use and recycle) nonetheless does not suffice in itself to change the world of building: this principle will guide all of us during the semester to aim at an urbanism and architectural practice deeply committed to a transformation project, the fruit of in-depth thinking on the built heritage and its metamorphosis. How can we reveal, show, intensify or create new qualities of spatial and structural use of existing buildings? What position should we hold in the face of the theories at work in designing a modern building? How can we go beyond modern thought to carry it into the contemporary stakes involved? We must take on the transformation project in a determined way, adopting a clear and decisive attitude about the heritage studied, with the objective of doing better with less, frugality, recycling and economy of means, yes, but for an ambitious project: more city, more architecture, more space, fewer means, gestures and materials.

#### PERMANENCE AND INDETERMINATION

We will have to come to terms with a building that was already thought out, built and has had one or two lives. This pre-existence will be the leverage of the project, so that we can build in, on, around or with what

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Code: **M.7.1 P702**

Teachers: M. BOTTINEAU

**ECTS credits :** 11

Number of weeks : 16

Nber of hours / semester : 112

Nber of hours / week : 7

Personal work : 128

is built, whether it be a recipient to fill, an artificial floor, the base on which to let the new rise or extend, or a new context to transform, by adding, subtracting or grafting.

As for new build, the question of flexibility will be essential from the beginning and we will have to measure the capacity for adapting of an existing building to new uses, an urban environment that has changed and norms that have become more complex. This is an opportunity to be seized to question what the project, beyond its architectural resolution in itself, can bring to the city and the neighbourhood it is set in, by transforming the void and public space as a prelude to the project.

Precise knowledge of the building to be transformed and discovering its potentials, its specificities, will be necessary to define one or several keys to come in with, through thinking about the structure, uses, technique (fluids, thermal), materials (re-use, use of bio-sourced and recycled materials), ... This transformation should find a balance between the permanence of the building the project will reveal (structure, spatiality, relationship to a natural or urban landscape) and its capacity to remain open, to possess a certain indetermination (faculty to adapt, evolvability, reversibility of uses, resilience of works...)

In this first year, we shall investigate our modern 20th-century heritage and examine this heritage to make it capable of taking up these challenges. It will not be a question of transforming to set in stone, but to transform to make future transformation possible and thus a stage in the lives of the building to come. Re-adapting a building now without compromising its future or its potential, and avoiding programmed and technical obsolescence.

Finally, to transpose Aldo Rossi's words about the city, we will consider that architecture "is something that [must last] through its transformations and that the simple or plural functions that it fulfils over time are the high points in the reality of its structure". (2)

1 Citing Antoine LAVOISIER (1743-1794)

2 ROSSI Aldo, L'Architecture de la Ville, Gollion, Infolio, 2001, 251 pages.

## CONTENT

This project workshop proposes to transform a 1960s building, a former leather workshop, into a temporary extension of the La Villette Architecture School.

The master studio, in a first phase, will help students understand through a fine-honed analysis the specificity of a building to be transformed before any intervention on it: specific typology, remarkable structure, implementation of know-how of a particular period, construction detail, volumetric organization, etc...

The site involved is near 144 rue de Flandres (the sine qua non condition for its being used). It is surrounded by important urban infrastructure (ring road, canal, railway lines, tramway line) and on a considerable slope. These urban and topographic particularities will also be the object of analysis to compare with that of the building itself.

The extension programme will then be superposed on analysis of the building and the context; it can be questioned and even radically. It will be a question of pertinently thinking through change in the programming over the course of the analysis of the building and the site to find the right fit for their specifics within the content of the different parts of the programme.

This will involve adapting and choosing the most appropriate tools (cross-sections, maquettes, sketches, plans, details) to respond to the different stages of the project as an integral part of the exercise.

The semester will be in two phases:

- Individual work over the first 5 sessions to set off thinking about the project. A brief period to test out the first attitude, explore various scenarios and set up a problematic to orient the students towards a precise analysis of the building under study.

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*Code:* **M.7.1 P702**

*Teachers:* M. BOTTINEAU

**ECTS credits :** 11

Number of weeks : 16

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An intermediate jury session will close this first stage.

- After debating the initiatives of the first phase, students will work in self-selected groups of two in the following sessions to develop a complete transformation project. The last two weeks before final work is turned in will be exclusively devoted to representing the final project.

A pre-jury session will be organized some weeks before the final work, then a final jury will close out the semester.

**ASSESSMENT**

- tutorial and weekly correction

- Continuous assessment, intermediate jury session and final jury session

- Phase 1

Reading and references to analyze will be proposed to students, each of whom will make their own report to stimulate collective discussion in the workshop.

Oriented analysis: text, schemes

Pre-projet: maquettes, drawings, plans, cross-sections and schematic perspectives

- Phase 2

Hand in a complete transformation project: reduction scheme, plans, cross-sections, elevation, details, images and maquettes

<b>Code:</b>	<b>M.7.1 P703</b>
<b>Domain:</b>	<b>Inventing within the existing: Heritage and change</b>
<b>Teachers:</b>	R. HELMHOLZ, M. LEPINAY

<b>ECTS credits :</b>	<b>11</b>
Number of weeks :	16
Nber of hours / semester :	112
Nber of hours / week :	7
Personal work :	128

## PROJECT

### LARGE COMPLEX: BECOMING AND CHANGING

#### OBJECTIVES

A growing part of the architects' activity is the transformation of existing buildings, especially those built in the middle of the 20th century. The question that arises in this way is to make do with what is already there and to engage in a project process that rejects both the posture of the clean slate and the flight into obsolescence, this tyranny of novelty and change.

Knowledge of the built environment, of construction methods and systems is a powerful resource when it is approached in a scholarly manner. We must think about transformation in order to be able to safeguard. It is important to consider these questions by considering transformation as an essential alternative to invest in as a project in the face of the mere substitution of one object by another. This position is part of a strategy to reduce the consumption of raw materials, to reuse the products of deconstruction while exploring the potential for mutation and reconfiguration in a historical continuity that is open to the transformation of uses and types.

Transformation means reorienting the course of things, giving them a new material and immaterial value. Through an analytical and structural reading of buildings and places, project work must lead to the transformation of the relationships between things, a way of articulating the time of a building with the present time.

Any transformation makes sense if it intensifies the building as an architectural and urban object and as a geography. It is necessary to integrate the historical and cultural dimension of the architectural project, and to reinstall time as a value. What is at work here is the relevance with which one invests the potential for mutation, transformation, reconfiguration of an architectural object in a common history.

#### CONTENT

The large complex: Thinking about the future of large collective housing operations in view of the challenges of reducing fossil fuel consumption. The case of the Cité du Pressoir built in 1963 in the lower Belleville district of Paris.

The work of the semester consists in assessing the project processes that can be used to address the contemporary issues of reducing the consumption of raw materials, energy sobriety and the notion of comfort in relation to the tectonic question of the edifice. The proposed work should make it possible to explore the material and immaterial values of the residential building and to envisage its future.

A work that crosses scales and entry points: geography, spatiality, construction and tectonics, distribution, typology, programme, uses and practices, opens up the understanding of the collective dwelling building as a fundamental part of the construction of the city and explores the material dimension essential to its mutation.

The project as manipulation :

The project is a moment of exploration, manipulation and research. The students will be led to apprehend all the elements that define and guide the practice of the project as a prerequisite to the constructed space and of the project as a vector of shaping and transformation, its means and its necessities. The rhythm of the semester will be organised around sequences lasting from 2 to 5 weeks built on the breaking of the scales of representation of the drawings and models. These back and forth movements between the scale of the constructive detail (1/20th - 1/10th) of the envelope and its components, that of the housing (1/50th), that of the building and the plot (1/500th) and that of the town (1/2000th-1/5000th) will allow us to question in a very efficient way a thought of the building in its articulations between uses, system and order of construction, spatial figure, geometry and geography.

Code: **M.7.1 P703**

Teachers: R. HELMHOLZ, M. LEPINAY

The drawing :

Representation must be approached as a question, beyond the tools: what do we say when we draw? What project questions do we open up?

Freehand drawing requires concentration in execution as much as time, that of its patient elaboration. Drawing by hand requires coherence of scale. Drawing with a computer opens up the experience of repetition, tracings, deformation and superimposition. The work of the semester must lead to questioning them.

Culture and process :

The work of the semester must lead the students to become aware of the importance of explorations which participate in the fabrication of a thought of the architectural project. The tools of this workshop are those of culture and observation, expression and research: drawing, modeling, prototyping, writing understood as active media that substantially interfere with the project. The architectural project is structured by a thought, an intellectual construction that comes from the articulation between theoretical knowledge and specific knowledge of representations. If architectural drawing is envisaged as the medium of the project, with which it is realized, the project is the place of integration of conflicts, the place of resolution of questions that confront each other in the complexity of the crossing and superimposition of the subjects it convokes.

## **ASSESSMENT**

L'atelier de projet a lieu les vendredi entre 10.00 et 18.00h en salle 110.

La dimension collective de l'enseignement est une donnée essentielle du travail de projet. A ce titre les étudiants seront sollicité pour présenter, analyser, discuter la production collective et le processus de développement des projets réalisés en petits groupes et individuellement.

Des visites de bâtiments seront organisées au cours du semestre afin de construire collectivement une culture des situations construites de certains grands ensembles de la région parisienne et d'immeubles d'habitation collective remarquables.

Le cadencement du semestre s'organisera autour de séquences qui articuleront entrées, thématiques et échelles de représentation qui donneront lieu pour chacune d'elles à une évaluation des travaux.

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Code: **M.7.1 P704**

Domain: **Conceive and Construct architecture**

Teachers: E. MOURIER, M. SAIMPERT

**ECTS credits : 11**

Number of weeks : 16

Nber of hours / semester : 112

Nber of hours / week : 7

Personal work : 128

## PROJECT

### ALREADY THERE : RESOURCES, TRANSFORMATION, CONSTRUCTION

#### OBJECTIVES

The course is based on two teaching objectives and on respecting them simultaneously in the project approach:

- Articulation between new-build and heritage
- Materiality as support for architectural expression.

This involves:

- Encouraging students to practice a working method favouring invention and discovery through the project
- Encouraging interdisciplinarity, especially through regular interventions by an STA teacher in the project course
- Enabling each student to elaborate a reasoned and individual project attitude

#### CONTENT

Apply global thinking to a plot in an unusual situation in the Paris suburbs – integrate buildings to be kept/transformed and buildings to be constructed (dwelling programmes), working from ground preparation to implementation details. This programmatic content enables extending the project process by introducing the dimension of built heritage.

Understanding the issues involved in what is ‘already there’ (meaningful heritage for the city) associated with a programme of densification: analyzing capacities for transformation and possibilities for intervention (rehabilitation, transformation, extension, demolition – construction...), exploring possibilities of articulating new-build and existing buildings.

This course aims – for both new-build and rehabilitation – at creation of new forms of inside/outside relationships, new gradations from public to private, new uses, as for example, differentiated or seasonal utilisation of certain places.

The project is based on an iterative approach articulating several scales. The environmental qualities of the outside spaces and of the buildings, as well as study of the materiality of the interventions, will be the guiding thread of the project’s development. Architectural expression will be sought within the logics of the project.

#### WORK REQUIRED

Basic knowledge about environmental quality, problematics of urban dwellings, rehabilitation, construction and implementation principles, will be provided students in the form of the teachers’ courses or the students’ presentations. Courses and presentations in the morning, project correction for the rest of the day.

Half of the group will carry out the building surveys, while the other half takes on site analysis. A restitution session will enable the entire group to have a complete knowledge of the site. A graphic chart will be used by the whole group: existing/demolished/created, line values, hatching...

Preliminary work (thinking through the existing structures, ground preparation, programme, choice of interventions) will be carried out by groups of three. Then, each student will take up an intervention hypothesis and reinterpret it in order to carry out an individual building project (new-build, rehabilitation, transformation...), conceived in its materiality to a high degree of precision. Each student will base his/her project on one or more references to be presented to the entire group in a commonly decided manner.

../..

Code: **M.7.1 P704**

Teachers: E. MOURIER, M. SAIMPERT

**ASSESSMENT**

Obligatory class attendance. Weekly presentation of work in progress, group correction.  
Continuous assessment with project logbook.  
Conceptual, study and project development maquettes.  
Site maquette made by the whole group, with individual project maquettes inserted.  
Conventional documents: plans, cross-sections, perspectives, facades...  
Argument : text + sketches + solar study  
Two intermediate assignments and one final assignment to be turned in, carried out in consequent level of detail.

**PREREQUISITE**

Know how to analyze a site and a program and reformulate them as a project.  
Project knowledge of problematics of urban dwellings.  
Minimum knowledge of construction and implementation principles, both traditional and present-day.

**PREPARATION FOR**

Carrying out complex projects with a mix of scales and built intervention types.  
Project autonomy on the part of students.

**LANGUAGE**

Course language: French  
Communication languages: French

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**Code:** M.7.1 P705  
**Domain:** Conceive and Construct architecture  
**Teachers:** C. BARREAU

**ECTS credits :** 11  
 Number of weeks : 16  
 Nber of hours / semester : 112  
 Nber of hours / week : 7  
 Personal work : 128

**PROJECT**  
**NAVAL ARCHITECTURE**

**OBJECTIVES** Bringing more depth to project methodology by working on a complex technical and architectural programme: building a ship.

**CONTENT**

Due to its complexity and the interlacing of the diverse programme elements, a ship project elucidates the importance of global vision and positioning that enables hierarchisation of choices resulting in final coherence. Students will conceive of an architecture where formal, technical, functional and environmental constraints are inextricably linked. For example, Archimedian equilibrium is a constraint that is easy to identify. This inescapable limitation, influenced by every step in the decision-making process, thus contributes to becoming aware of the importance of an indispensable global vision for the pertinence of the architectural response. A ship project requires very strict coherence between a form, a structural principle, materials... This kind of architecture is subject to unavoidable technical criteria within restricted and moving spaces and is confronted with problems, situations and a highly varying environment. Far from being confined to designing small units, naval architecture covers a field running from aircraft to submarines, from the smallest of craft to the largest of ships (which, for that matter, are termed 'buildings' in French, in the case of a high tonnage ship). The components of this equilibrium stem from an approach that is at once architectural, technological and physical. Students will be confronted with, on the one hand, modelisation of the 'form' (highly specific) of the float and its geometric (hydrostatic) analysis and, on the other hand, with the functional organisation of interior and exterior space, always limited by the nature of the object. They will have to become acquainted with the environment (sea) and learn to master scale ('limited spaces'). The course will also deal with the 'mobile' character (lifelike situation) as well as the 'constructive' aspect of the ensemble, so that their principle architectural implications can be taken into account. Specificities and axes of work. The method called 'ship design loop': an iterative methodology for grasping a ship project that enables integration of all the criteria involved in the choices. Study of complex forms: learning about curves, representation and implementation of the curved envelope. Optimisation: interlacing of volumes, search for lightness and functional intelligence. Implementation of classical construction notions. Scientific notions specifically connected by hydrostatics, hydrodynamics. Archimedes principle, principle of the hydrofoil...

**WORK REQUIRED** Students will learn ship architecture through a global approach during a project they will have to design on the basis of a programme given them: for example, a floating, mobile extension of our school over the Ourcq Canal or a live-in sailing ship.  
 A sailing session is scheduled in the beginning of the semester.

**ASSESSMENT** Assessment will be made on the basis of the overall performance of each student over the entire semester, with final project worth 30%.



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Code: **M.7.1 P706**  
 Domain: **Architecture of Milieux, Territories, Landscapes**  
 Teachers: A. BOYADJIAN, J. LIPSKI

ECTS credits : 11  
 Number of weeks : 16  
 Nber of hours / semester : 112  
 Nber of hours / week : 7  
 Personal work : 128

## PROJECT

### TERRITORIES EMERGING: THE INHABITED FRINGE

#### OBJECTIVES

- Map and sensitive reading of a territory founded on recognizing the landscape specificities, existing projects and social dynamics, local resources in terms of construction materials
- Experimenting with a process of project conception linking the scale of the local territory and the scale of the building
- Creating architecture projects as fragments of a landscape project
- Working on the materiality of the project: research into local resources for raw construction materials, on transforming materials and using them right to the scale of architectural detail

#### CONTENT

##### SITE:

The village of Saint-Antoine (Lanrivain community in the Côtes d'Armor) is set in a landscape of woods and old bocages\* that dominate the Blavet river area. This village with its granite buildings, loaded with history, has recently been reused after a period of abandonment to host the summer festival 'Lieux mouvants' (Places on the move), and has become the object of contemporary artistic works in the stone ruins

##### PROJECT:

The local Kreiz-Breizh council community (French communauté de communes) launched a study on creating the Institute of gardens and landscapes of Brittany in the village and is presently considering a new way of managing the old bocages, with the idea of transforming them into a "fantastic garden", an original and people-oriented public park, as a scene for dialogue between contemporary art and nature.

##### ISSUES AT STAKE:

The issues at stake in this kind of transformation are many and call for thinking along several lines. First of all, that of economic and cultural development of a rural area: what advantages and ties might this project provide in the present-day local context?

Then, from a programmatic standpoint: what sort of project would appropriately underwrite a garden that should be attractive, people-oriented, popular and respectful of the cultural and landscape identity of the place?

Finally, from an architectural standpoint, how can we imagine the infrastructures and architectures to be conceived as permanent structuring elements for the place and capable of dialogue with the movement in favour of gardens and artistic projects?

##### STUDY:

The study will deal with how to set up the Institute of gardens and landscapes, as well as how to arrange the Garden, in a setting of micro-architectures. This will involve formalizing an ensemble project founded on hypotheses set out by local actors and designing the architectures that will have to be both contemporary and respectful of the landscape identity of the place. The materiality of the projects will be developed right to the detail scale, on the basis of research into local resources, transformation of materials and their use.

\* *bocages: the wooded countryside characteristic of northern France, with small irregular-shaped fields and many hedges and copses*

Code: **M.7.1 P706**

Teachers: A. BOYADJIAN, J. LIPSKI

**ASSESSMENT**

- Continuous assessment based on Active participation and the weekly progress of the work being done (projects and analyses)
- Attendance in required educational trips
- Presentation of projects:  
There will be a mid-term and a final assignment.

**WORK REQUIRED**

Drawings, maquettes and texts

**ORGANISATION OF WORK**

Workshop limited to fifteen students.

Group project on management and landscape, individual architectural project.

**EDUCATION TRIPS**

- Beginning of the semester: study trip of 4 days to the site, meeting local actors (the municipal councils, DDTM/Direction Départementale des Territoires et de la Mer, CAUE Conseil d'architecture, d'urbanisme et de l'environnement, associations)
- At the end of the semester: presentation of the workshop results to local actors in the Saint-Antoine area

**ASSIGNMENT:**

Educational assignment at the School: drawings, maquettes, texts

And an exhibit and presentation of the work in situ is planned.

\* bocages: the wooded countryside characteristic of northern France, with small irregular-shaped fields and many hedges and copses

**Code:** M.7.1 P707  
**Domain:** Architecture of Milieux, Territories, Landscapes  
**Teachers:** S. ROUSSEL, B. CIMERMAN

**ECTS credits :** 11  
 Number of weeks : 16  
 Nber of hours / semester : 112  
 Nber of hours / week : 7  
 Personal work : 128

**PROJECT**

**LANDSCAPE/S, ARCHITECTURE AND NATURAL HAZARDS:  
 URBAN COASTAL TERRITORIES**

**OBJECTIVES**

Today, 60% of the world's population lives less than 60 km from the coast. According to the United Nations Environment Programme (UNEP), this proportion will rise to 75% in the next 30 years. On the one hand, artificial coasts will lose their role as a buffer between the earth and the sea and, on the other, natural phenomena, in particular those due to climate warming, will make these areas liable to important changes incompatible with growing urbanization.

To date, nations have reacted to these phenomena by an approach involving control of nature. Today, many actors, pushed by the decrease in public budgets, are calling into question this control thinking by exploring long-term adaptive approaches: sea erosion and submersion are natural hazards that must be taken into account and dealt with.

Rethinking the inhabitability and ways of living in coastal areas inevitably leads to questions about the way landscapes evolve and the link between them and notions of identity and culture. The word Landscape can be understood as a whole, made up of built and non-built space: go beyond the idea of architecture to take in the urban scale; there is not an architectural object on the one hand and on the other an outside, garden or public space, but rather development of a territory whatever the scale of the project.

During this semester, we shall work on a given coastal area by exploring how to help conception modes to evolve, both on the architectural and the urban scales, in order to deal with territorial management in osmosis with natural hazards. This way of working involves comparing multiple approaches including: the question of the identity of territory and people, policies of environmental preservation, the issues involved in heritage and conservation, but also technical, geographic, economic and legal approaches.

**CONTENT**

Our project group for this year has set up a partnership with the town of Vias in Languedoc Roussillon. This town has a historical village located inside its perimeter, a long shoreline subjected to sea erosion with a large part of the submersible area located between the sea and the Canal du Midi, which will be the object of our study.

Due to worsening erosion because of climate change and the extent of recent storms, in 2015 the State and the Agglomeration Community of Hérault Méditerranée carried out major works to restore the ribbon of dunes to protect and valorize the beach lines, a tourism area of remarkable natural and landscape character. Following upon this work, the townhalls of Vias and Portiragnes, and tourism professionals, signed a heritage charter in 2016 targeting how to define the organizational measures that will take into account these risks and their evolution.

Our project group will deal more particularly with the submersible area behind this ribbon of dunes where there are many camping grounds and year-round dwellings. The issues involved are: thinking on the urban scale of how to requalify the site regarding access and landscape qualities, proposing an alternative to the leisure dwelling types presently existing and that will be adapted to natural hazards and, finally, proposing long-term solutions for permanent dwellings.

This study will be carried out in partnership with local actors as well as academic partners in scientific professions.

**ASSESSMENT**

The semester will have a first assignment to provide an appraisal and sketch of the strategies identified following examination of the site, encounters with local actors and personal work on sensitive reconnaissance. Following this assignment, students will have to decide upon a pertinent intervention strategy to be developed in this context and will choose the site/s for intervention and the means to be implemented.

The project conception stage will then be the object of an intermediate assignment and the final assignment will be for the end of the semester.

Intermediate assignments will be done in the presence of the teachers of the Landscape/s seminar.

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Code: **M.7.1 P708**  
 Domain: **Architecture of Milieux, Territories, Landscapes**  
 Teachers: Y. MAHIEU

**ECTS credits :** 11  
 Number of weeks : 16  
 Nber of hours / semester : 112  
 Nber of hours / week : 7  
 Personal work : 128

**PROJECT**

**PERSONA GRATA, URBAN MOBILE INTERFERENCE STRUCTURES  
 DESIGN / FABRICATION**

**OBJECTIVES**

PERSONA GRATA  
 Mobile urban interference structures  
 Design / manufacture

A- Confronting a strong and topical social issue.  
 Taking up the title PERSONA GRATA of the exhibitions taking place from 16 October 2018 to 20 January 2019 at the MAC VAL (Musée d'art contemporain du Val-de-Marne) and the Musée national de l'histoire de l'immigration, it is proposed to question the notion of hospitality. However, this question could be considered for cases other than refugees.

B- Confronting the conception of a mobile urban interference structure that generates exchange.  
 For hospitality is not limited to meeting the needs of the body (eating, sleeping...).

C- To develop a truly ecological approach by putting into practice, within the framework of the design of a structure:  
 - The concern of an optimized relationship between structure and form => economy of material.  
 - The use of natural renewable materials (bamboo, straw ...).  
 - The use of recycled materials, reused ... if possible in local resources (Cardboard, plastics, metals, earth, tires, bamboos from the Parc de La Villette ...).  
 Other specific materials will be used sparingly.

D- Confronting manufacturing

E- Use digital manufacturing tools (not imposed)

F- Bring these structures into play in the urban space and achieve a representation of these «actions»

**CONTENT**

Complementary OPPORTUNITIES

Connecting to the CTID 832 manufacturing intensive by participating ... or not  
 (participation in CTID 832 is proposed, but not imposed)

=> To give oneself the possibility to build and / or have one's project designed in P710 during the CTID 832 manufacturing intensive in April and / or afterwards in the context of P710.

**PROGRAMME :**

The aim is to design and build at scale 1 mobile urban interference structures.

These Structures make it possible to create or promote interactions with a strong social purpose.

The emergence of the programme will come from a critical point of view related to the:

- Experiments from structures carried out the previous year ...

Code: **M.7.1 P708**

Teachers: Y. MAHIEU

- New experiments carried out by students
- Exchanges with associations and actors in the field
- Direct exchanges between students and the «public» concerned
- Analyses of proposals already made (Camps de la Chapelle, Ivry ... )
- Analysis of sites and their operation (including standards, regulations, etc.)

CHOICE OF SITES :

We solicit the attention of the students on the choice of sites of course and investigation, allowing to converse with populations.

The student creates his program and chooses his site with the members of his team.

Example of a project from previous years on other themes of the intensive manufacturing MIP 926 :

Interactive membranes at L'Isle-d'Abeau

<https://www.youtube.com/watch?v=5xQ1oTRL-lw>

**ASSESSMENT** Continuous control + final control

**WORK REQUIRED** Team work (from 2 to 4 people) with the usual study tools (conventional drawing, volume mock-ups, computer simulations), to which will be added physical models of the structure and the creation of a prototype.

**Code:** M.7.1 P709  
**Domain:** Living in urban worlds  
**Teachers:** P. PUMAIN, L. PÉNISSON

**ECTS credits :** 11  
 Number of weeks : 16  
 Nber of hours / semester : 112  
 Nber of hours / week : 7  
 Personal work : 128

## PROJECT

### ARCHITECTURAL AND URBAN PROJECT

#### OBJECTIVES

On sites undergoing transformation in the Parisian inner suburbs, we propose to simultaneously explore the issues concerning the form of the contemporary city and the current modes of living, working and leisure activities.

This program to devise a project at various scales, from territory to architecture, integrates the specific theme of the «urban project», emphasising the importance of the notion of public space.

As examples, in previous years, the students worked on:

«Porte de Montreuil» in Paris and the connection Paris-Montreuil beyond the ring road

The fringes of the Canal Saint-Denis in Paris, Aubervilliers and Saint-Denis

The districts of Ivry-Port and Port-à-l'Anglais in Vitry-sur-Seine

The site of the 'Campus Grand Parc' urban programme in Villejuif around the future station 'Villejuif-Institut Gustave Roussy' of the Grand Paris Express.

This year, we propose to develop thinking on the territory located around the Pleyel crossroads in the townships of Saint-Ouen and Saint-Denis. This site is to welcome one of the largest of the future Grand Paris Express stations at the connection between the 'Blue Line' and the 'Red Line', but also with the metro and the RER (Rapid Transit line). Whether the site will also welcome the future Olympic Village or not – depending on whether France is given the Olympics – in any case, it will be the object of extensive development due to the station, but also to its location near the centre of Saint-Ouen and Saint-Denis, as well as to the centre of Paris via public transport. We most especially wish to examine the site for its poly-centrality, density and social mix, all at the heart of thinking about the development of the Grand Paris project.

#### CONTENT

During the program, students work in groups of 3 or 4, which allows them to experience a collective mode of production of an urban project, close to future professional practice. The project is structured in 3 phases:

- Diagnosis: A «look» on the City

Each team presents its own reading and its diagnosis of the territory and the current projects.

- Urban project and strategies

Each team proposes an urban strategy on all or part of the territory studied, in response to the predefined objectives. The work has to end with the explicit definition of what a contemporary district can be, by redefining a structure of streets, squares and islets.

- Architectural project

On a «strategic» location of their urban project, the students individually develop, at a level of rough layout, a building or a group of buildings.

#### WORK REQUIRED

Each team presents the progress of their project once a week, and benefits from individual correction. The display of analyses and projects is favoured, which enables an exchange between all groups around each project.

The work in model is impulsed from the diagnosis and analysis phase, as an essential element of understanding of the territory and design of the urban project.

- Urban analysis and diagnosis: Sketches, photos, texts, analysis maps from 1/10,000 to 1/2,000.

- Study and depiction of the urban project: Urban models in 1/1,000. Schemes, plans and urban sections from 1/5,000 to 1/1,000, perspectives, «atmosphere» sketches.

- Architectural rough layout: Model in 1/500. Plans and sections in 1/500. Volumetric sketches and proposals of materials.

#### ASSESSMENT

Analysis and urban project 50 %, architectural project 50 % (the active participation of the students, as well as their capacity to develop their project, will be taken into account).

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*Code:* **M.7.1 P710**  
*Domain:* **Living in urban worlds**  
*Teachers:* F. LIPSKY, F. MEADOWS

**ECTS credits :** 11  
 Number of weeks : 16  
 Nber of hours / semester : 112  
 Nber of hours / week : 7  
 Personal work : 128

## PROJECT

### ENVIRONNEMENTS, ARCHITECTURE AND LANDSCAPE

#### OBJECTIVES

In the context of the environmental emergency, the project approach is based on the assumption that the design of territories depends primarily on the size of our living spaces. The workshop develops the learning of the project by favoring the intermediate scale, (the hectare is the basic unit), to design living environment(s), composed of living and non-living organisms, which embody the interaction between man and nature, between the biological and the social. In this micro-territory, architecture is not an element by addition, but one of its major components, in the same way as the plant, because spatiality opens up to the sensitive experience of the subject with what surrounds him.

#### CONTENT

PEDAGOGY

- Deepening of the mechanical design and notions relating to sustainable architecture,
- Radicality of the architectural, urban and landscaped project, through the development of a critical mind relating to the environmental issues of the twenty-first century,
- Coherence of the project as a whole. This acquisition involves the manipulation of different scales, in a process that is nonlinear.

The French language is preferred, but the workshop can be held in English

#### ORGANISATION

The expected formats and contents are listed before each intermediate rendering.

Renders are individual and subgroup.

The presentation of the project is adapted to the themes of the workshop. The design models are an integral part of the renderings, except in case of confinement of the students for health reasons.

#### ASSESSMENT

ATTENDANCE IS COMPULSORY AT ALL SESSIONS

Continuous control + intermediate renderings + final jury.

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Code: **M.7.1 P711**

Domain: **Living in urban worlds**

Teachers: P. CHAVANES

ECTS credits : 11

Number of weeks : 16

Nber of hours / semester : 112

Nber of hours / week : 7

Personal work : 128

## PROJECT

### ARCHITECTURE OF HOUSING, RESIDENTIAL PERSPECTIVES

#### OBJECTIVES

Collective housing, residential perspectives

This project group will examine the new paradigms emerging from current challenges to designing and constructing housing in France on the basis of project experiments which – without neglecting globally reduced and stereotyped production – nonetheless propose a critique capable of exploring new paths and formulating hypotheses attuned to the aspirations of society and a part of the professional world, in the face of contemporary urban, environmental and social challenges.

Founded on an awareness of the anthropological dimension of inhabited space (relationship between functions, uses and practices), and structured by familiarity with the major modern paradigms of Habitat in the face of the logic of urban fabric, this critical and exploratory approach will place the architectural project on housing and buildings squarely in the residential stakes involved and the problematic of development of the contemporary city within three major expectations:

- relationship between type, use and programme
- relationship between constructive typology and distributive typology
- relationship between “logic of the building” and logic of the urban fabric.

#### CONTENT

On the basis of the knowledge acquired during the License degree about understanding the relationships between space and use,; and a knowledge of the typology of the building understood as an element in the urban fabric, we will approach this at the scale of the dwelling, the building and the urban fabric.

We will propose an in-depth examination of this knowledge on the basis of a project prospective and increasing analysis of three types of approach that articulate use, space and construction:

1/ a programmatic approach aiming at critical examination of housing programmes and the building, as well as their present modes of construction and founded on identifying the aspirations of a society that foreshadow the expectations and possibilities of housing for tomorrow in relation to the uses linked to collective and private space (social mix, evolvability, space sharing, services and energy, space for cars and storage, surfaces and spaces within dwellings, etc.);

2/ a typological approach aiming at characterizing the pertinent types of projects founded on critical interpretation of traditional and modern types and on the basis of exploring values and aspirations about contemporary residential space (aspiration to individual dwellings and private space, to the collective spaces and services they entail, to nature, the landscape, leisure, etc.)

3/ a constructive approach to designing structures and envelopes articulating tectonic and environmental issues:

- Definition of structural typologies relating to types of plans and their distribution.
- Definition of envelopes combining the stakes involved in use and environmental concerns at the urban scale.

We will set this effort within the perspectives of urban development characteristic of the contemporary city, a territorialized city, open to geography and landscape and in which natural spaces and ‘the greater landscape’ play a central role.

We will also examine the residential forms of this “territory-city” of today through seeking a appropriate typological expression to the new relation that is emerging between residences, public spaces, natural spaces and landscapes. In this perspective, we will investigate the contradictory aspiration of a new urban ecology seeking to being together the necessity of a densified city and the aspiration to a “natural city”.



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*Code:* **M.7.1 P711**

*Teachers:* P. CHAVANES

**ECTS credits :** 11

Number of weeks : 16

Nber of hours / semester : 112

Nber of hours / week : 7

Personal work : 128

**ASSESSMENT**

The day's teaching will take place in two major phases, a 'theoretical' phase in the morning (courses, presentations, debates, 'major corrections') and individual correction in the afternoon.

Project correction will be collective, making up a teaching tool and intended for everyone, so students' attendance is obligatory throughout the day.

Each session will be assessed and graded.

Assessment criteria: 1) following the course, 2) understanding the architectural issues at stake, 3) architectural representation, 4) quality, pertinence and coherence in developing the project.

**WORK  
REQUIRED**

The subject is about collective housing.

This will be structured around study of a corpus relating to modern housing and its underlying thematics, on the one hand, and on the other, exploring new questions posed to housing architecture in terms of the programme, uses and construction.

This work will involve a cumulative approach in several sequences combining analytical work, brief theoretical exercises and longer exercises addressing the project.

Student's work will be finalized at the conventional scales of a pre-project in architecture (1/5000 for the urban fabric and 1/200 and 1/100, details at 1/50 and 1/20; 3-D representations and maquettes, etc.)

This constructive approach will be furthered by participation from a teacher from the STA field (20h)

Work is individual.

**LANGUAGE**

Course language: French

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*Code:* **M.7.1 CTID701**

*Domain:* **Living in urban worlds**

*Teachers:* G. BILLAUX

**ECTS credits :** 1,5

Number of weeks : 14

Nber of hours / semester : 21

Nber of hours / week : 1,5

Personal work : 18

## **CROSS-DISCIPLINARY COURSE INTRA-DOMAIN**

### **ESTHETICAL ACOUSTICS**

#### **OBJECTIVES**

Go beyond the single preoccupation of fighting noise to examine sound as an aesthetic object on the one hand and subsequently as a dimension in architectural and urban space.

#### **CONTENT**

This course relies on a listening methodology as a daily discipline through group exercises to be carried out individually afterwards. The study of sound, a component and result of architectural and urban space, will be based on theoretical work (physical acoustics, writings of Murray Schafer and Pierre Mariétan) and acoustico-aesthetic analysis of remarkable urban sites.

#### **WORK REQUIRED**

Lectures and practical on-the-ground exercises.

#### **ASSESSMENT**

Continuous assessment 50%, final exam 50%.

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**Code:** M.7.1 CTID702

**Domain:** Living in urban worlds

**Teachers:** F. SOUCARRAT CHAUDHURI

**ECTS credits :** 1,5

Number of weeks : 14

Nber of hours / semester : 21

Nber of hours / week : 1,5

Personal work : 18

**CROSS-DISCIPLINARY COURSE INTRA-DOMAIN  
ENERGY TRANSITION AND ECO-CONSTRUCTION**

**OBJECTIVES**

The law on energy transition towards green growth and the associated action plans will enable France to contribute more effectively to dealing with climate change and reinforcing the country's energy independence. In this context, we are interested in HEMP and its use in building, as France is the foremost European hemp producer with some 11,000 ha under cultivation. This fact, and the climate and environmental stakes involved, will lead us to consider development of this construction sector to move towards a positive ecology that overcomes barriers, enables initiatives and immediately produces tangible benefits for everyone. This most particularly concerns energy renovation of housing and underwriting the energy performance of new construction.

Beyond providing high thermal performance, tomorrow's constructions will take into account four other dimensions:

- 1/ Human beings as building users
- 2/ Territory and the connections between buildings and their environment
- 3/ Health and convenience in buildings
- 4/ A building's life cycle

**CONTENT**

Environmental and Technological Stakes

A hemp field acts like a carbon sink: in order to develop, plants absorb, trap and store carbon. In France, 20% of final energy is spent on residential and tertiary heating. Thus, countering energy expenditure in buildings is a duty for the whole profession for the sake of users, but also for the planet. Building systems allying hemp concrete and lime plastering and rendering can provide real solutions: 1m<sup>2</sup> of walling 36cm thick provides a thermal resistance  $R > 4m^2 K/W$  (depending on the manufacturer) with a low grey energy consumption and a decrease in greenhouse gas emissions. This means we have an insulating construction system with fine thermal performance. The other advantage of the material is the fact that it combines the characteristics of an insulator and a wall, which gives it the inertia needed to store heat that makes for a comfortable atmosphere in both summer and winter.

Hemp concrete prepared on the construction site can be poured between frame panels or sprayed with a machine. Hemp sprayers have now come onto the market in various sizes and working on various principles. The advantage of the machines is that it is possible to spray continuously, farther, higher and with less water use, all of which decreases the building and drying times.

We are interested in the stakes involved in using hemp in construction / renovation, particularly in France, from hemp production right through to architectural implementation.

**ASSESSMENT**

50% of the note based on continuous assessment (course attendance and participation) and 50% on presentation of personal work (digital file)

**LANGUAGE**

Course language: French

Communication languages: French

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Code: **M.7.1 CTID703**

Domain: **Living in urban worlds**

Teachers: C. VALLECILLO

**ECTS credits : 3**

Number of weeks : 14

Nber of hours / semester : 42

Nber of hours / week : 3

Personal work : 35

## **CROSS-DISCIPLINARY COURSE INTRA-DOMAIN TRANSMISSION OF ARCHITECTURE**

### **OBJECTIVES**

Thinking about how to transmit architecture means questioning:

- What to transmit? to whom? and how?
- The various ways architects can practice within the broad field of architecture
- How to spread an understanding of architecture in society

### **CONTENT**

This course is organised into a set of meetings during which students should move forward progressively around a collective work project dedicated to creating a debate about what is involved in the transmission of architecture. This collective work may produce documentation or events. The organisation of the work goes up to the level of valorisation and evaluation.

### **ORGANISATION**

Each week the schedule of the course is organised as follows:

- One half hour dedicated to the exchange of information to be discussed (book, study, exhibition, event);
- One hour for a lecture concerning: teaching, evaluation of teaching tools, history of teaching, history of the architect's profession;
- The remaining two hours are dedicated to collective work around:
  - debate organised by the students;
  - invitation of guests for lectures;
  - elaboration of the corpus for the "Memory of the school";
  - organisation of the collective project of the course.

### **ASSESSMENT**

Active participation in the course (lecture, speech, leading the course, etc.)

Production of a short paper about one theme related to the course topic

Continuous assessment (active presence): 50%

Student's own report/paper: 50%.

### **PREPARATION**

This course is open to students who wish to learn how to spread understanding of and teach architecture.

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Code: **M.7.1 CTID704**

Domain: **Living in urban worlds**

Teachers: J.-B. EYRAUD

**ECTS credits : 3**

Number of weeks : 14

Nber of hours / semester : 42

Nber of hours / week : 3

Personal work : 35

## **CROSS-DISCIPLINARY COURSE INTRA-DOMAIN**

### **FIGHTING AGAINST UNWORTHY DWELLINGS – TOOLS AND PRACTICES**

**OBJECTIVES** This optional course deals with unworthy dwellings, their various forms and the housing policies and urbanism concerning this issue

**CONTENT** The importance of urban renovation and more recently the PRQAD (Renovation Plan for Deteriorated Older Neighbourhoods) adopted by the latest legislative plan on housing and urbanism have put intervention in older housing on the agenda again.  
Legislation concerning unworthy living conditions including unhealthy, dangerous or unsafe conditions, as well as the standards and rules about lead poisoning of children and overcrowding have been reinforced. Students must thus be made aware of legislation on poor housing through a series of theoretical courses and practical work.  
Each student will visit a dwelling site, list the dysfunctions, survey the surface, make a diagnosis and evaluate the means to implement how to correct these faults. They will also take stock of the impact of these housing conditions on inhabitants, both adult and children. This hands-on exercise informs students about standards pertaining to poor housing.

**ORGANISATION** Assignment includes a detailed survey of the dwelling plan, surface, list of dysfonctions, written and photographic examples of well-argumented letters that can be utilised by housing occupants to request being moved elsewhere with a recapitulative table of dysfunctions according to standards.

**ASSESSMENT** Continuous assessment 50%  
Final exam (presentation of work) 50%

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Code: **M.7.1 CTID706**

Domain: **Living in urban worlds**

Teachers: A. DE BIASE, P. ZANINI

ECTS credits : 3

Number of weeks : 14

Nber of hours / semester : 42

Nber of hours / week : 3

Personal work : 35

**CROSS-DISCIPLINARY COURSE INTRA-DOMAIN  
GRAND PARIS OBSERVATORY : OR HOW TO FOLLOW  
THE TRANSFORMATION OF THE METROPOLIS**

**OBJECTIVES**

The course will explore the notion of projection to the large temporal scale of the Parisian region. We shall examine interdisciplinary methods to understand how to project forward by 150 years to 2165 and the meaning that this temporal projection holds and gives rise to in how a sustainable Grand Paris will be created.

Prerequisites recommended: knowledge and interest in mapping, image production, a good knowledge of Indesign, Illustrator, Photoshop.

**CONTENT**

Now that the Grand Paris project is a real prospect, it will be necessary to revisit the grand dreams that it has seen go by in order to understand today's projections. The city unceasingly projects itself, but we must be able to distinguish the project from the projection. While the architecture project attaches the future to a rational analysis of the past and present without discontinuity by reducing the future to a short and experimental temporality, urbanism, on the other hand, breaks with the anchorage of the present to make the future city into a fantasmatic screen onto which desires and fears are projected. Projection enables us to open up the present, but also to question it more radically and thus can play a decisive role.

This will involve grasping the interest of working on a large temporal scale, rather than a short period, and how that affects structuring a territory. If today's technologies have produced a dangerous "shortening of the future" to the point even of contracting prospective imagination, a sort of temporal blinding, our programme proposes to work on a larger outlook capable of decompartmentalising the temporal idea of the future that has become common in recent decades after the 1973 oil crisis. We propose to work on and experience these various time scales in all disciplines and produce projections of 150 years into the future for the Grand Paris territory.

**ASSESSMENT**

Continuous assessment (analysis) 30%

Final assignment (conception-fabrication) 70%

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Code: **M.7.1 CTID707**

Domain: **Living in urban worlds**

Teachers: A. TUFANO, M. ANTONIOLI

**ECTS credits : 3**

Number of weeks : 14

Nber of hours / semester : 42

Nber of hours / week : 3

Personal work : 35

**CROSS-DISCIPLINARY COURSE INTRA-DOMAIN**

**GLOBAL DESIGN AN INVITATION TO DO RESEARCH THROUGH MAKING**

**OBJECTIVES**

For some time now, ‘making’ seems to be in a process of rehabilitation in the fields of conception and projects (design, architecture, ‘making the city’). According to some recent works in sociology (Michel Lallement, *L’Âge du faire* (The Age of Making), Paris, Seuil, 2015) and anthropology (Tim Ingold, *Making. Anthropology, archaeology, art and architecture*, in French, Editions Dehors, 2017, in English, Routledge, 2013), this rediscovery of “making” could open up the capacity to invent new cognitive territories and accompany economic and societal transformations (emergence of the FabLabs, “third places”, social design, collaborative practices in architecture, etc.)

However, these theories and practices are not ‘new’, but fit into a long genealogy of seeking experimental alternatives to classic methods of transmission and learning in project disciplines (developed by the Bauhaus, Black Mountain College or the Global Tools collective, among others).

2019 work will start with experiments and texts by Tim Ingold and will propose research by design in partnership with other institutions in the Comue HESAM.

**CONTENT**

This intensive workshop will provide interdisciplinary experiences of the project, over short periods of time (instant project) but enriched through shared reading on conception understood as beyond the traditional opposition between ‘manual’ and ‘intellectual’, ‘theoretical’ and ‘practical’.

Proposed reading list and the names of the guest speakers will be given to students at the beginning of the second semester.

**ASSESSMENT**

Attendance and active participation 50%

Work (project and text) 50%

**LANGUAGE**

Course language: French

Communication languages: French, Italian, English

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Code: **M.7.1 CTID708**

Domain: **Living in urban worlds**

Teachers: F. SOUCARRAT CHAUDHURI

**ECTS credits : 3**

Number of weeks : 14

Nber of hours / semester : 42

Nber of hours / week : 3

Personal work : 35

## **CROSS-DISCIPLINARY COURSE INTRA-DOMAIN**

### **LEARNING FROM INDIA AND ITS 29 STATES, CULTURE & HERITAGE**

#### **OBJECTIVES**

This course will deal in a critical manner with history (800 years of colonisation), culture, architecture and traditional, modern and contemporary urbanism in India. Students will be able to participate in thinking about Indian modernity set in a 10,000-year tradition and a young democracy looking towards its possible future identity after 70 years of independence!

Rural exodus in India is a major issue due to demographic growth and difficult living conditions in rural areas. This rural exodus has led to overpopulation of cities that now have gigantic slums around them. Faced by their proliferation, the authorities have chosen to provide them with basic infrastructure – sewers, potable water. Most of the cities suffer from much atmospheric and noise pollution. Since 2015, India wants to construct or re-arrange 100 “intelligent cities” (smart city) in this gigantic country with unbridled and nightmarish urbanization.

Half of the world’s 20 most polluted cities are in India and one third of the urban population has no access to a flush toilet. In Delhi, only 17% of households are connected to the sewer system. A June 2015 note by the Treasury Direction estimates it would take 680€ billion to cover needs for investment in urban infrastructure over the next 20 years.

All sectors are concerned, from urban mobility to the construction of sewer networks, public lighting or waste disposal and processing. This is quite sufficient to whet the appetites of business... on the condition they are willing to invest, as the government wishes to promote public-private partnerships, a formula that enables them to save on public expenditure and give the project management to a special purpose vehicle, an organization outside the slow and meandering workings of the Indian administration, made up of town representatives and investors. What this means is towns and neighbourhoods administrated like businesses by managers.

Trusting urban projects to public-private partnerships could accelerate the process of discrimination affecting the poorest members of society by transforming cities into gigantic economic production centres. In Indore or Bhubaneswar, several slums have been razed and all the families have not been re-housed. Even if the 100 new cities are supposed to include rehabilitation of slums or the inclusion of poor families, the budgets allocated to this ambition are often minimal. The smart city creation project “does not take into account all the people who make up an urban space”, as denounced by Bhanu Joshi, researcher at the Center for Policy Research in Delhi. “Making land profitable by constructing fashionable enclaves is not enough to make a city inclusive, livable or intelligent.”

#### **CONTENT**

The number of city-dwellers could increase by 500 million by 2050, which means that India would have to construct the equivalent of two Singapors every year. Several megalopolises like Bangalore or Chennai (Madras) are already threatened by the exhaustion of aquifers serving them. Many people are supplied by tank lorries that bring water in from neighbouring rural areas.

Tech businesses try to position themselves in this market in hopes of selling “smart data” that would enable optimal use of resources (sensors that would tell the authorities where there are leaks in the water system or turn on public lighting only when pedestrians or vehicles are passing by).

Contrary to the model of energy-devouring megalopolises, the famous Indian architect and urbanist Romi Khosla has called for the creation of thousands of autonomous “natural cities” that “would shelter a multiplicity of local cultures, each with its own identity and a unique way of operating that would protect them from globalizing homogenisation and climate change”. These modest-sized cities would be an alternative to the megalopolises, responding to the challenges of urbanization. This is an ideal not all that far removed from Mahatma Gandhi, who proclaimed that “India exists in its villages”!



Code: **M.7.1 CTID708**

Teachers: F. SOUCARRAT CHAUDHURI

The following themes will be dealt with successively:

- The 7 sacred places and traditional cities (Kedarnath / Badrinath / Somnath / Puri / Dwarka / Rameshwaram / Varanasi)
- Protection of cultural heritage in India (pilgrimage sites and tourist heritage sites)
- Traditional and classic Indian architecture traditionnelle (the science of the Vastu Shastra)
- The 100 «smart cities» designated since 2015
- Metropolises (Mumbai / Kolkata / Delhi / Chennai / Bangalore)
- The question of modern Indian architecture (Chandigarh / Auroville)
- Contemporary Indian architecture (architects Romi Khosla / Rahul Mehrotra / P.B. Sajan / Satyah Prakash Varanashi / Shirish Beri)
- The low-cost housing question in India since Balkrishna Doshi / Laurie Baker / (policies, forms, uses)
- an urban model called Vidhyadhar Nagar, Jaipur
- The Rural-Villages and Swaraj villages
- The Panchayat!

**ORGANISATION** 3.5 hours weekly, 1.5 hours of courses and 2 hours of tutorial with individual and group supervision for 14 sessions, or 49 hours.

**ASSESSMENT** Continuous assessment (active participation): 50%, Personal work (document report and note on research intention): 50%  
Active participation in the course (presentation, different tutorials), creating a file on the question linked to the course theme that could be a prelude to a research subject for the master's cycle memoire

**LANGUAGE** Course taught in French  
Language of communication: French, English

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Code: **M.7.1 CTID709**

Domain: **Living in urban worlds**

Teachers: M. FENKER

**ECTS credits : 1,5**

Number of weeks : 14

Nber of hours / semester : 21

Nber of hours / week : 1,5

Personal work : 18

**CROSS-DISCIPLINARY COURSE INTRA-DOMAIN**  
**ARCHITECTURAL DESIGN AND ERGONOMIC APPROACH**

**OBJECTIVES**

- Introduction to links between architecture and ergonomics in the design approach to the workplace.
- Understand the contribution provided by ergonomic analysis of work activities in architectural design.
- Learn more about the role and competences of architects in interventions aimed at transforming work situations..

**CONTENT**

‘Ergonomics, organisation and work spaces’ proposed jointly by the University of Paris 1 and ENSAPLV brings together students in ergonomics and architecture.  
 It aims at developing intervention competence concerning issues of work organisation with special consideration of spatial questions to understand the resources and constraints for people at work.  
 This optional seminar corresponds to two intensive sessions in a joint master’s.  
 The first is on the ergonomic approach in designing and carrying out projects in businesses. It is devoted to analysis models of work and the approach to the spatial dimensions of activity in and uses of the workplace. Intervention approaches will be presented (November).  
 The second session concerns spatial design and architecture of the workplace. It is devoted to the links between space, architecture, organisation and working life on the basis of case studies and will also take up the issue of modalities of interaction and cooperation between architects and ergonomists (April).

**ORGANISATION**

Two intensive sessions: one at the University of Paris 1 and one at La Villette.  
 Understanding the ergonomic, social and spatial aspects of an intervention in the workplace through exercises and case studies.

**ASSESSMENT**

Preparation of a dossier

**REQUIREMENT**

Stakes involved and contributions to be expected in architect-ergonomist cooperation  
 Taking into account work habits and needs of the people involved in their workplace.

**PREPARATION FOR**

Architectural project management, assistance in architectural project management

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*Code:* **M.7.1 CTID710**

*Domain:* **Living in urban worlds**

*Teachers:* O. BOUCHERON

**ECTS credits :** 1,5

Number of weeks : 14

Nber of hours / semester : 21

Nber of hours / week : 1,5

Personal work : 18

**CROSS-DISCIPLINARY COURSE INTRA-DOMAIN**  
**INFRAORDINARY OF MODERNITY**

**OBJECTIVES**

Show, understand and comment on spatial and cultural productions in urban and rural territories relating to:

- those who organize for others and impose their work on the majority
- those who organise and take on what directly concerns them by managing contradictions and inventing their own everyday life.

On the basis of these case studies, build up a well-argued critique of Modernity and its contemporary phase, that of metropolization.

**CONTENT**

The course is developed through presentation by the teacher or by guest speakers of study cases divided up into 'families':

- ETHNOGRAPHY OF A MODERN CITY
- REASONS FOR GRID
- URBAN VILLAGE
- BETWEEN TWO HOUSING ESTATES
- TIME OF METROPOLIZATION

**ASSESSMENT**

Personal work: attendance, course notes, final exam

**LANGUAGE**

Course language: French

Communication languages: French

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Code: **M.7.1 CTID711**

Domain: **Arts and scenography**

Teachers: G. BILLAUX

**ECTS credits :** 1,5

Number of weeks : 14

Nber of hours / semester : 21

Nber of hours / week : 1,5

Personal work : 18

## **CROSS-DISCIPLINARY COURSE INTRA-DOMAIN**

### **URBAN SOUND WORKSHOP**

**OBJECTIVES** Place electro-acoustic technology in the service of means of representation.

**CONTENT** Introduction to sound recording, editing and mixing.  
Master the principles of urban sound surveying, acquire the sound techniques linked to video or cinema.  
Linked to courses on cinema and audiovisual services.

**ORGANISATION** Theoretical courses (signal theory, techniques) and practical work (using instruments, on-the-ground exercises).

**ASSESSMENT** Continuous assessment 50%, final exam 50% (making a sound document)

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Code: **M.7.1 CTID713**

Domain: **Arts and scenography**

Teachers: A. PETITRENAUD, O. JEUDY

**ECTS credits : 3**

Number of weeks : 14

Nber of hours / semester : 42

Nber of hours / week : 3

Personal work : 35

**CROSS-DISCIPLINARY COURSE INTRA-DOMAIN  
ARTISTIC EXPERIMENTATION AT CHÂLON-SUR-SÔNE**

**OBJECTIVES**

This course gives students the opportunity to intervene physically on the former port and river site of Chalon-sur-Saône. The implementation of experimental devices, urban scenographies, architectures or ephemeral landscapes, consists in revealing the potentialities of the place and producing urban imaginaries with the materials still present.

**CONTENT**

Before the decision of a requalification project, this former port site offers the opportunity to experiment in the field with various artistic, architectural and urban projects related to the potential of its industrial heritage. Port facilities can be reused as driving forces to explore new spatial, architectural and territorial dynamics. It is a question of experimenting with new ways of reinvesting this territory, of stimulating new rhythms of vision, of working on the urban future of this river port wasteland.

For more information, visit the website of our research team «Architecture Milieu Paysage» (AMP/ENSAPLV) at the following addresses:

<http://amp.scribnet.org/>

<http://amp.scribnet.org/accueil/terrains/chalon-sur-saone-port-nord/?menu=1&sousmenu=3>

<http://amp.scribnet.org/formations/master/>

and on the Port Nord website at the following addresses:

<http://portnord.eu/>

<http://portnord.eu/rita/index.html>

**ORGANISATION**

- Intensive workshop on the Chalon-sur-Saône port site
- Elaboration and experimentation in an in situ intervention project

**ASSESSMENT**

Continuous assessment 50%, intervention assignment 50%

Photo dossier on practices developed, schemes envisioned for producing spaces

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Code: **M.7.1 CTID714**

Domain: **Arts and scenography**

Teachers: B. PIGOT, M. MAZLOUMAN

**ECTS credits : 3**

Number of weeks : 14

Nber of hours / semester : 42

Nber of hours / week : 3

Personal work : 35

## **CROSS-DISCIPLINARY COURSE INTRA-DOMAIN**

### **SCENOGRAPHY: STUDIO – PROJECTS**

#### **OBJECTIVES**

Scenography will be defined as an art of place in that its calling is to shape the representation place relative to a given work. Its spatial approach is generated by the quest for signs and symbols handling metaphor as an effect of reality. Related to play, the movement of bodies and time, dramatic action, text, history and memory, it will seek out the emotion of space.

#### **CONTENT**

This workshop aims at giving students the theoretical tools and analytical practices of scenographic design in the field of theatrical representation: discovering the space of writing, transforming it into scenographic schemes, thinking the stage-audience relationship, understanding the constraints of the stage and architectural space. A theoretical section will provide tools to understand scenographic space, the phases of its creation and completion. We shall also explore the work of the scenographer and interventions of various actors.

#### **ORGANISATION**

- 1/ Creating a poetic text
- 2/ Scenography of a theatre play in the form of a workshop supervised by a stage director working on creation of the theatre season and in partnership with theatres. An exhibit of maquette work in the theatres concerned may be possible.
- 3/ Sensitive approach: physical exercise workshop aimed at comprehending the space involved through actors' exercises.

#### **ASSESSMENT**

Regular class attendance, 2 assignments

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Code: **M.7.1 CTID715**

Domain: **Arts and scenography**

Teachers: M. DESSARDO

**ECTS credits : 3**

Number of weeks : 14

Nber of hours / semester : 42

Nber of hours / week : 3

Personal work : 35

## **CROSS-DISCIPLINARY COURSE INTRA-DOMAIN**

### **DETOUR IN SCULPTURE !**

#### **OBJECTIVES**

This course, proposed by an engineer and a sculptor, will simultaneously address issues of architecture, sculpture, construction and urban planning on a local scale. It is structured in 2 intensive times: a time of analysis and design, and a time of production in the form of a workshop.

#### **CONTENT**

The exercise will focus on the diversion of human flows.

- 1 course of analysis and proposals by drawing
- A stage of prototypes, models and 1:1 scale tests of the different proposals in 2 or 3 intensive days
- Construction in 2 or 3 intensive days
- Observation of uses and improvement and monitoring of devices

LINK TO IMAGE & VIDEO

<http://ensaplv.rouby.dessardo.com/>

#### **ASSESSMENT**

The final assessment will be quantitative.

#### **LANGUAGE**

Course language: French

Communication languages: French, Italian, English, Spanish

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Code: **M.7.1 CTID716**

Domain: **Arts and scenography**

Teachers: B. NAVINER

**ECTS credits : 3**

Number of weeks : 14

Nber of hours / semester : 42

Nber of hours / week : 3

Personal work : 35

## **CROSS-DISCIPLINARY COURSE INTRA-DOMAIN**

### **TREES IN THE CITY, TREES FOR THE CITY**

#### **OBJECTIVES**

Although they have an important role to play in various issues (notably environmental) in large urban agglomerations, plants remain poorly understood.

The objective of this course is to enable students to discover and enrich their knowledge (and particularly that of trees) to permit reasoned choices and sensitive implementation of their projects.

#### **CONTENT**

Courses, tutorial work and visits will be devoted to discovering trees, centering on three themes :

1/ Discovering the characteristics of plants : observe / describe / recognise

- living beings with a particular life and needs / functions and roles of trees

- an extraordinary diversity: how to recognise them?

- identify and describe trees: classification, vocabulary

2- Why plant trees in the city?: understanding the issues associated with their presence (aesthetic, sanitary, ecological, environmental, social, cultural, economic, etc.) Pourquoi planter en ville : compréhension des enjeux liés à leur présence dans la ville (esthétiques, sanitaires, écologiques, environnementaux, sociaux, culturels, économiques, etc.)

- trees in the city: a history of planted places in the city and plant

- trees for the city: an ecological and technical examination to understand the roles of trees and what they contribute

- public policies and trees : in the city and outside it

- cities with trees

3- Of trees and human beings

- discovering trees through other ways of looking at them: what we can learn from poets, writers, painters, photographer, film-makers

- mythological trees, symbolic trees and remarkable trees

- the travels of plants: where do the trees in our cities come from?

The exercises linked to visits and tutorial work will lead students to better understand trees in the city in a sensitive and plastic way (observation and recognition of trees), as individuals and constitutive, transformative elements in space (analysis of relationship with a plant or constructed environment), their changes over the seasons (observation of the transformations of a site).

Information about this course is available at:

<http://brigitte.naviner.fr/bn-ens/bn-ens-arbre/bn-ens-arbre-accueil.html>

#### **ORGANISATION**

This course includes complementary teaching approaches: courses, visits and tutorial work to enable direct observation of trees, working together, offering an important role to dialogue and drawing.

Visits will be in Paris or the nearby suburbs to observe trees, urban plantations and the problems they encounter or bring about.

#### **ASSESSMENT**

Continuous assessment 50% → active presence in course, tutorial work and visits.

Personal work 50%

#### **PREREQUISITE**

Erasmus students are welcome and assignments can be done in French, English or Spanish. Good understanding of French is indispensable.



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Code: **M.7.1 CTID717**

Domain: **Arts and scenography**

Teachers: E. RESTREPO

**ECTS credits : 3**

Number of weeks : 14

Nber of hours / semester : 42

Nber of hours / week : 3

Personal work : 35

**CROSS-DISCIPLINARY COURSE INTRA-DOMAIN**

**BUILD FOR A STORY: THE MODEL AS A MOVIE SET**

**OBJECTIVES**

This course proposes to think about the way cinema can propose a critical vision of architecture and a thought for it. Through a work of literary adaptation, he will focus more particularly on the question of the “décor” : this “dummy architecture” intended to carry the filmic narration. The production of a short film will allow students to confront a set of translation processes at work, to move from text to film, giving a central role to architecture at each stage of the process.

**CONTENT**

The exercise will consist in adapting a very short literary text in which architecture plays a fundamental role. It will therefore be a question of thinking about the passage from the text to the scenario, then of elaborating a temporal division, plans, points of view to make a setting. Once built, the filmer will then ask to think about the light, the temporality, the sound, then the editing to make the requested short film.

The stakes will therefore be of several kinds: to think about the translation of a text in cinema, to think about a critical architecture and the way to film it so that it is both set and protagonist.

The architecture conceived inside the cinema, unlike that built in the physical space, requires that specific aspects be considered, namely a temporality or narrative intensity (architectural dramaturgy), a system of framing and plans, a spatial sound, a perspective adapted to the lens of the camera, etc.... the «critical» work required of students will be part of the awareness and implementation of these choices.

**ORGANISATION**

The course will initially consist of a series of theoretical courses of 2 hours, followed by an intensive practical session of 5 days at the intersemestre (last week of February) and will end with a summary rendering over half a day.

Achievements: a short film and a set of critical texts

**ASSESSMENT**

Attendance and active participation in courses

Final realization

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Code: **M.7.1 CTID733**

Domain: **Arts and scenography**

Teachers: H. REIP, V. JOUVE, F. PINATEL

**ECTS credits : 1,5**

Number of weeks : 14

Nber of hours / semester : 21

Nber of hours / week : 1,5

Personal work : 18

## **CROSS-DISCIPLINARY COURSE INTRA-DOMAIN**

### **FILM EDITING, WRITTEN EDITING**

#### **OBJECTIVES**

Producing pertinent film approaches that lead to research on architecture, the city and landscape. Encourage students, on the basis of what they see, to produce 'forms that think'.

This optional course is intended for students enrolled in the Art, Cinema, Architecture seminar and who wish to pursue work through the cinema. It will involve creating a memoire-film composed of a short documentary about 15 minutes long and a written assignment.

#### **CONTENT**

Avoiding dissociating form from substance, we will consider the film and the written word as two elements of the same project. Thought together, they will constitute the matter of this hybrid research, the filmed part of which will advance simultaneously with the work of writing in correspondence and complementarity.

Giving shape to their own questioning through a project that will develop in stages, from the note of intention, to location, then shooting and finally editing, the student will be led to question their way of seeing and retranscribing reality in order to elaborate a thought written in images.

Elaborate the synopsis, the structure of a film, its development, the way in which it approaches the problematic formulated in the dissertation. To set up favourable conditions for filming, to anticipate the development of the project. Finally, working on the film's material: what the shots are made of, their length, the movements they suggest, the elements they contain, filming the protagonists, filming the locations? or how to achieve a balance between what we do and what we want to say. Finally, in the editing process, think about how each shot can be put into dialectical relation with the others, within a constructed, scaffolded object, from its foundations to its temporality.

Throughout the semester, the film screenings will enable us to understand in a theoretical way the times of conception of a sequence or a film, or of a spatial setting of the image: analysing the elaboration of an intention, the shooting, the editing, the narrative. Understand what is at stake at each of these stages, what can be implemented, according to the effects to be produced and the issues raised.

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**Code:** M.7.1 CTID718  
**Domain:** Conceive and Construct architecture  
**Teachers:** M. DESSARDO

**ECTS credits :** 3  
 Number of weeks : 14  
 Nber of hours / semester : 42  
 Nber of hours / week : 3  
 Personal work : 35

**CROSS-DISCIPLINARY COURSE INTRA-DOMAIN**

**THE LONGEST BRIDGE**

**OBJECTIVES**

1:1-scale course on sculpture and construction.

The objective of this course, proposed by an engineer and a sculptor, will explore the issues involved in using a light, simple, economical and low-resistance material to build a medium-scale structure. Shaping the material (folding, nestling, cutting), a necessity since no other material than cardboard may be used, will enable students to explore at reality scale elementary construction techniques, especially those concerned with assemblages.

**CONTENT**

This exercise will propose that each student construct a bridge, a horizontal structure several meters long and several in height, that is meant to sturdy enough to be walked on at the end of the exercise. This will be built on the basis of a single-material module, a cardboard sheet, and the assemblages between modules will be carried out without glue.

The choice of cardboard as the only material replies to several constraints:

- mono-material conception is one of the strategies of eco-design
- the single-material constraint enables an approach to diverse assemblage strategies
- the modest cost of cardboard and rapid shaping with the assistance of simple and affordable tools
- without glue, cardboard is perfectly biodegradable and recyclable.

The idea of the course is to confront students with a concrete construction reality that goes beyond the sole structural dimension, thus including thinking about the process of shaping (folding, cutting, etc.) and material experimentation (the structures will be climbed on after five days of work and their sturdiness/solidity given a reality test by the students themselves).

Evaluation will be in the form of a final competition and will take into account, for each solution:

- its performance: the distance crossed by one person before the bridge may fall (if it does)
- its lightness, total span and span between two piers of the bridge
- its elegance: the technical and aesthetic coherence of the solution adopted

**ORGANISATION**

This exercise will be carried out in the intensive week between semesters in the volume workshop and under the glass skylight

**ASSESSMENT**

7 hours of course work (cardboard work, assemblage techniques, presenting examples, etc.)  
 28 hours of tutorial  
 5 hours of preparation

**LANGUAGE**

Teaching language: French  
 Communication languages: French, English, Italian, Spanish

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Code: **M.7.1 CTID719**

Domain: **Conceive and Construct architecture**

Teachers: A. TÜSCHER

**ECTS credits : 1,5**

Number of weeks : 14

Nber of hours / semester : 21

Nber of hours / week : 1,5

Personal work : 18

**CROSS-DISCIPLINARY COURSE INTRA-DOMAIN  
ELEMENTS OF COGNITIVE SCIENCES FOR ARCHITECTURAL DESIGN:  
PSYCHOLOGY AND APPLIED NEUROSCIENCES**

**OBJECTIVES**

Present some aspects of scientific knowledge (provided by psychology and neurosciences) aiming at promoting architectural design capable of creating harmony between pre-cognitive expectations of users and multi-sensorial experience of spaces.

**CONTENT**

In a first stage, students will be asked to think about the notion of space on the basis of some fundamental questions concerning sensation, perception and spatial representation. Proceeding from contemporary articles, we shall attempt to outline as complete as possible a panorama of scientific theories endeavouring to describe the way we perceive space around us through different sensorial modalities: sight (in particular), touch, hearing, balance, etc. We shall then take up subjects especially pertinent for architectural perception: anatomy and physiology of architectural perception, architecture and body/mind systems, pre-cognitive human expectations and experience of architecture. Without any pretension of being exhaustive, we shall try to understand how our body is equipped with a unique ensemble of systems capable of receiving signals from the world around us and analyzing interactions between each element involved in the architectural process and the human sensory system. The physiology of emotions, the anatomy of memory systems, the bases of empathy will also be presented in order to provide students with elements aiding in comprehension of complex interactions between humans and their built environment.

**ASSESSMENT**

Oral presentation during the semester.

**BIBLIOGRAPHY**

Bibliographical references for the course will be given at the beginning of the semester.

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*Code:* **M.7.1 CTID720**

*Domain:* **Conceive and Construct architecture**

*Teachers:* F. NEUMAN

**ECTS credits :** 1,5

Number of weeks : 14

Nber of hours / semester : 21

Nber of hours / week : 1,5

Personal work : 18

**CROSS-DISCIPLINARY COURSE INTRA-DOMAIN**  
**FLOATING STRUCTURES**

**OBJECTIVES** Acquiring the scientific knowledge specific to the naval building project and more generally to any floating structure.

**CONTENT** Notion of finesse  
Archimedes' principle  
Weight report – stability  
Ship theory : major balances.

**ORGANISATION** This option is intended for students in the naval architecture project and those interested in mastering the hydrostatic principles of any floating body.  
The course provides theoretical and applied working sessions in relation with the project or any other problem proposed by the students.

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Code: **M.7.1 CTID721**

Domain: **Conceive and Construct architecture**

Teachers: S. NAVA

**ECTS credits : 1,5**

Number of weeks : 14

Nber of hours / semester : 21

Nber of hours / week : 1,5

Personal work : 18

**CROSS-DISCIPLINARY COURSE INTRA-DOMAIN**

**NOTHING WILL TAKE PLACE BUT THE PLACE**

**OBJECTIVES**

Put the project thinking into the form of a printed brochure.

**CONTENT**

An “artist’s book” is a form of experimental edition that appeared in the 20th century through which artists seize upon an object - the book - to make it into, not the mediating support for a work of art, but the work of art itself. In light of this idea, can we say that there is an “architect’s book”, no longer a book as a work of art but a book as architecture, or a book that might embody some form of the architecture project?  
How can a book, or more generally a printed object (fanzine, brochure, pamphlet...) be considered, by its morphology, its nature, as a pertinent tool for building up thinking *in* architecture and not only *on* architecture?

This is what we shall endeavour to explore in this optional course, by making a booklet around the project carried out during the semester. This small work will be seen as a place to set out thinking, thinking of the “on-this-side” but also about the “beyond” of the current project: so to speak, compiling the “arounds” to better grasp the “heart of the matter”. This will provide a locus for dialogues of references, intuitions and ideas, images (photographic, drawings, schemata...) and texts (be they theoretical, fictional, poetic, technical...), any form which, set in relation, can contribute to devising an architectural form.

Perhaps conventional (an adjective understood as not pejorative, since working on and with convention is eminently acceptable), or rather experimental, serious or caustic, poetic or lampooning, modest or outrageous, the work produced will take on its own decisive identity, mirroring the architectural thinking that constructed it.

What we will be aiming for is thus an autonomous object, thought out in its wholeness (contents, format, typography, layout, materiality), so that it embodies the most true possible idea of the project carried out during the semester. For - although done in parallel to the project - this object will of course be anything but a communication support, rather, it is to be a locus, a place to bring to life the critical, reflexive and poetic device that makes it up. *An equivalent.*

**ASSESSMENT**

Attendance and active participation in the course. Final assignement.

Creation of a booklet (format and number of pages to be determined on the basis of the student’s project).

Knowledge of a layout software is recommended (InDesign or Quark X.Press)

**LANGUAGE**

Course language: French

Communication languages: French, English, Italian

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Code: **M.7.1 CTID722**

Domain: **Conceive and Construct architecture**

Teachers: M. BOURDIER

ECTS credits : 3

Number of weeks : 14

Nber of hours / semester : 42

Nber of hours / week : 3

Personal work : 35

**CROSS-DISCIPLINARY COURSE INTRA-DOMAIN**  
**CRITICAL HISTORY OF ARCHITECTURE AND URBANISM IN MODERN AND**  
**CONTEMPORARY JAPAN.**

**OBJECTIVES**

This course will deal with a critical approach to the history of architecture and urbanism in modern and contemporary Japan. It will invite students to take part in a discussion about the question of modernity in Japan not considered as a cross between a deep tradition and a strong occidentalisation.

**CONTENT**

The following themes will be presented:

- Japanese traditional and classical architecture: a culture of wood
- The question of a modern Japanese architecture
- Contemporary Japanese architecture
- “Japonism” in architecture
- Housing in Japan from the Meiji period to contemporary periods: policy, shapes and uses
- An urban model called Tokyo
- The protection of cultural properties in Japan
- Working with Japanese carpenters

This course will be connected to the 50th anniversary celebration of the school.

**ORGANISATION**

Each student is invited to take an active part in this course: lectures, collective work, their own work on a question related to the course that would prefigure a research theme for a master's thesis.

**ASSESSMENT**

Continuous evaluation (active participation, regular attendance): 50%  
Final evaluation: a paper about the student's own research in Japan.

**Priority is given to students interested in going to Japan for a study stay**

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Code: **M.7.1 CTID724**

Domain: **Conceive and Construct architecture**

Teachers: F. BERTRAND

**ECTS credits :** 1,5

Number of weeks : 14

Nber of hours / semester : 21

Nber of hours / week : 1,5

Personal work : 18

## **CROSS-DISCIPLINARY COURSE INTRA-DOMAIN**

### **DIGITAL DESIGN: CONCEPTION, MODELISATION AND FABRICATION**

#### **OBJECTIVES**

The main objective is to establish a digital continuum in design and fabrication.

The aims relative to a digital continuum are:

- Designing a digital maquette meant to be constructed: utilising parametric modelisation and scripting, adapting design to material chosen, experimenting with assemblages.
- Creating the physical maquette with digital fabrication tools: design the files intended to carry out fabrication, assemble and assess physical maquette

#### **CONTENT**

Presentation of the concept of digital continuum.

Refreshing knowledge on parametric modelisation and using Grasshopper.

Initiation to 'scripting'.

Initiation to the design and modelisation of maquettes with element assemblage.

Initiation to using digital fabrication tools: laser cut, 3-D printing, etc.

#### **ASSESSMENT**

The first courses and supervised tutorials will be in the computer room. They will be followed by work in a FabLab.

Work required:

Designing a digital and a physical maquette project.

Handing in modelisation files and physical maquette.

Making a report on the project and the approach taken to design, modelisation and fabrication carried out.

#### **ORGANISATION**

Continuous assessment and final assignment



Code: **M.7.1 CTID725**

Domain: **Conceive and Construct architecture**

Teachers: D. GABBARDO

**ECTS credits :** 1,5

Number of weeks : 14

Nber of hours / semester : 21

Nber of hours / week : 1,5

Personal work : 18

**CROSS-DISCIPLINARY COURSE INTRA-DOMAIN**

**HISTORY/IES, TREATICES AND DOCTRINES: FABRICATION WORKSHOP**

**OBJECTIVES**

Le projet, appréhendé à de multiples échelles, au niveau urbain comme à celui du détail, se développera au moyen d'études morphologiques et constructives d'immeubles existants, pour aboutir à des plans détaillés et à de grandes maquettes.

Un apport d'enseignants du champ STA sera donc le bienvenu, tant sur la question structurelle que sur la réhabilitation énergétique.

**CONTENT**

This thinking relies on analysis of reference texts and aims at bringing out their finality (history, analytics, critique, doctrinal and communicational issues, the notions, articulating ideas.

The approaches to different authors are put back into their historical context during the lecture courses, then are compared during discussions about certain fundamental notions in order to bring out the permanent aspects and semantic evolutions, the relationships between the texts, the convergences or divergences among the authors.

In parallel to this work of reading, analyzing and discussing, students are encouraged to formulate a personal conceptual approach by re-examining the notions brought out from a historical or operatory angle. This investigation is translated into creating a theoretical text that makes explicit the personal thinking of the students about one or several notions that seem pertinent to them in relation to their own questioning.

**ASSESSMENT**

Participation in the group's work (continuous assessment): 25%

Analytical work (to be turned in in A4 and A3 format): 25%

Personal theoretical or doctrinal production (A4 format text): 50%

**WORK REQUIRED**

Choice of one or several texts by each student from a bibliography provided by the teacher.

Analysis of texts: contents, articulation of ideas, operators. Setting up a collection of quotations and a conceptual cartography.

Personal theoretical construction based on one or several notions.

**LANGUAGE**

Course taught in French

Language of communication: French, English, German

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Code: **M.7.1 CTID726**

Domain: **Inventing within the existing: Heritage and change**

Teachers: P. DEHAN

**ECTS credits :** 1,5

Number of weeks : 14

Nber of hours / semester : 21

Nber of hours / week : 1,5

Personal work : 18

## **CROSS-DISCIPLINARY COURSE INTRA-DOMAIN**

### **HERITAGE/S AND CHANGES**

#### **OBJECTIVES**

Introduction to the notion of heritage and the development of the concept. Presentation of protective instruments, types of change and forms of intervention. Reflection on the issues linked to change and to management of built heritage, whether on the cultural, functional, urban or ecological level. Setting up a cultural, conceptual and technical corpus as support for the project. Understanding the trades, professions and markets linked to heritage questions.

This course prepares students for heritage projects and for heritage trades and professions (programming, management...)

#### **CONTENT**

Historical, architectural and property heritage/s: cultural, urban, property and ecological dimensions.

Typologies: great recognized heritage, great unrecognized heritage, commonplace heritage, ordinary heritage

Types of change: functional change, repurposing, social change, up-to-standard rehabilitation, ecological change, adaptation of buildings to new requirements.

Issues involved: memorial or commemorative, cultural and tourism, urban, economic-functional, ecological  
Heritage and historical monuments: birth and development of a concept: Riegl, Viollet-le-Duc, Boito, Choay, the Venice Charter, ...

Memory and heritage: Nora, Corboz, Morisset,

Extension of the concept: temporal, functional, spatial (urban, landscapes...)

Legal tools involved in patrimonialisation

- Local: safeguarded sectors, AVAP (French urban planning regulation involving protected zones, for example, the ZPPAUP (Architectural, Urban and Landscape Heritage Zone Protection / Zone de Protection du Patrimoine Architectural, Urbain et Paysager), the PLU (Local Urban Planning rules)...

- National: Historic Monument Inventory and Supplementary Inventory, the Mountain and Coast Laws, nature parks...

- International: UNESCO classification

Actors involved, methods and intervention tools

Historical studies, technical diagnostics, upstream studies, feasibility studies and change scenarios, master schemes, optimization of property holdings...

Intervention concepts: conservation, restoration, repurposing, rehabilitation, maintenance, OPAHs (Programmed housing improvement operation / Opération programmée d'amélioration de l'habitat), urban actions.

Build in the built: restoration techniques, rehabilitation techniques, sustainable rehab, great heritage management

Examples of practices:

- Valorisation of historical monuments
- Repurposing industrial heritage
- Rehabilitation of modern heritage
- Change in banal heritage
- Adaptation of ordinary heritage
- Managing real estate assets
- Large funds manager policy

*Code:* **M.7.1 CTID726**

*Teachers:* P. DEHAN

**ASSESSMENT**

Analytical dossier based on observation of real uses, a survey or documentation on the concrete lay-out of spaces and their relationships, and an anthology of designers' statements about the expected uses.

**WORK  
REQUIRED**

Students are invited to link the proposals above with case studies. Each student will choose an example on the basis of which s/he will undertake to confront that space, as it was designed by architects, with the reality of the space as it is experienced and used by the people it was meant for. The analytical dossier will be based on observation of real uses, a survey or documentation on the concrete lay-out of spaces and their relationships, as well as a collection of and critical analysis of designers' statements about the uses expected.

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Code: **M.7.1 CTID727**

Domain: **Inventing within the existing: Heritage and change**

Teachers: B. PATTERSON

**ECTS credits : 3**

Number of weeks : 14

Nber of hours / semester : 42

Nber of hours / week : 3

Personal work : 35

### CROSS-DISCIPLINARY COURSE INTRA-DOMAIN

## URBICIDE : HERITAGE IN CONFLIT - DESTRUCTION, RUIN AND RECONSTRUCTION

#### OBJECTIVES

Referencing theoretical, philosophical and architectural/urban writings, an interdisciplinary approach will be adopted to enable students to develop an understanding and 'culture' related to architectural theory. Building conceptual tools that encourage critical thinking and analysis. Developing capacities to do research, visual representation, as well as both written and verbal expression. ENSAPLV proposes this course in English in order to enable students to participate in international educational activities (e.g. workshops and conferences organized by the school, exchanges with schools abroad). This course is open to exchange students.

#### CONTENT

This course will address the relation between architecture and ideology. Can architecture 'hold' or represent something of the order of an ideology or political meaning? If so how and with what consequences? The term 'urbicide' signifies the intentional destruction of cities and architecture as a distinct form of violence. This destruction is intended to eradicate the visibility or the possibility for certain identities and heritages to exist, however this destruction is not readily visible in the history of our discipline. This course evokes a counter-history of architecture, we will search for new historiographic approaches. Can the study of various cases of urbicide offer an alternative understanding of architectural history and heritage? How can we theorise this destruction of architecture and the city? What becomes of these sites of destruction and the traces of conflict? How do we interpret these ruins (towards a contemporary ruinology)? How do we address the reconstruction? How can we treat commemoration, cultural memory, forgetting and 'counter-memory'? What urban planning for the 'divided city'? What hope for the future of the city? What is the role of the architect?

#### ASSESSMENT

Active participation in discussion, readings - understanding and analyses of texts (think book club), visual representations, a short critical research paper with images.

#### WORK REQUIRED

Presentations, critical mapping, storyboard, posters with images and critical text, etc.

#### BIBLIOGRAPHY

Giorgio Agamben, Stasis: Civil War as a Political Paradigm (University of Edinburgh, 2015)  
 Lucia Allais, Designs of Destruction: The Making of Monuments in the Twentieth Century (University of Chicago, 2018)  
 Aleida Assmann, Shadows of Trauma: Memory and the Politics of Postwar Identity (Fordham University, 2016)  
 Robert Bevan, The destruction of memory : architecture at war (Reaktion Books, 2016)  
 Ryan Bishop, G. Clancey and J. Phillips, eds. The City as Target (Routledge, 2012)  
 Regina, Bittner, UN Urbanism (Jovis, 2017)  
 Wendy Brown, Walled States, Waning Sovereignty (Zone, 2010)  
 Esther Charlesworth, Architects Without Frontiers: War, Reconstruction and Design Responsibility (Architectural Press/Elsevier, 2006)

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*Code:* **M.7.1 CTID727**

*Teachers:* B. PATTERSON

**ECTS credits :** 3

Number of weeks : 14

Nber of hours / semester : 42

Nber of hours / week : 3

Personal work : 35

Martin Coward, *Urbicide: The Politics of Urban Destruction* (Routledge, 2009)  
Stephen Graham, *Cities Under Siege: New Military Urbanism* (Verso, 2010)  
Stephen Graham, ed. *Cities, War, and Terrorism* (Blackwell, 2004)  
Julia Hell, Andreas Schönle, eds., *Ruins of Modernity* (Duke University Press, 2010)  
Samia Henni, *Architecture of Counterrevolution : The French Army in Northern Algeria* (gta Verlag, 2017)  
Denis Hollier, *Against Architecture* (MIT, 1989)  
Bechir Kenzari, ed. *Architecture and Violence* (Actar, 2011)  
JoAnne Mancini, Keith Bresnahan, eds., *Architecture and armed conflict : the politics of destruction* (Routledge, 2014)  
James Noyes, *The Politics of Iconoclasm* (I.B. Tauris, 2016)  
Anthony Vidler, *Histories of the Immediate Present : Inventing Architectural Modernism* (MIT, 2008)  
Paul Virilio, Sylvère Lotringer, *Pure War* (Semiotext(e), 2008)  
Eyal Weizman, *Forensic architecture : violence at the threshold of detectability* (Zone Books, 2017)  
Lebbeus Woods, *War and Architecture* (Princeton Architectural Press, 1996)  
Lebbeus Woods, *Radical Reconstruction* (Princeton Architectural Press, 1997)  
Slavoj Žižek, ed., *Mapping Ideology* (Verso, 2012)

**LANGUAGE** Course language: English

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Code: **M.7.1 CTID728**

Domain: **Inventing within the existing: Heritage and change**

Teachers: V. TABOADA

ECTS credits : 3

Number of weeks : 14

Nber of hours / semester : 42

Nber of hours / week : 3

Personal work : 35

## **CROSS-DISCIPLINARY COURSE INTRA-DOMAIN ARCHITECTURE AND HERITAGE IN LATIN AMERICA**

### **OBJECTIVES**

This teaching aims to intervene on the tangible and intangible heritage, on the urban landscape, on the architecture of yesterday and its resonance of today in a specific context. It focuses on the Andean region located in Latin America, with a view to an example of social, heritage and urban development.

Objectives:

- Promote a permanent dialogue between heritage architectural production in Latin America and France
- Contribute to the necessary renewal of the approach of the architectural and urban project, in search of urban quality and the challenge of sustainable development.
- Reflect on architectural practice and the quality of use, the quality of social life of the spaces produced
- Provide the methodological tools and the knowledge that allow students to train in different architectural cultures.
- Reconnect with the ancestral Aymara-Inca culture in the Andean region (Bolivia, Peru, Ecuador) of South America.
- Sensitize students to the 'tangible and intangible' heritage of deprived territories, driven by committed architecture
- Share and found a thought based on openness to new and ancestral knowledge
- Provide a worldview of human activities of yesterday and today.
- Promoting a dialogue between north and south
- Learn from cultures elsewhere and appropriate them to enrich oneself

### **CONTENT**

- History of heritage practices and policies in the Andean region (Peru, Bolivia, Ecuador)
- Historical centers of the Andean city, models (ancient city/contemporary city), examples of restructuring, criticisms of planning instruments
- Urban and micro-urban typology, programming, expression and representation.
- Analysis at the territorial and urban scale: history, environment, landscape, morphology, uses...
- Urban phenomena in UNESCO World Heritage sites

### **ORGANISATION**

Intermediate renderings: Short exercises of comparative critical analysis of two urban places (buildings, historic centers, public squares, avenues...  
Heritage diagnostic studies, contextual sketches, programming.

### **ASSESSMENT**

Critical returns, individual summary file of the end of the year (3 plates A3)  
Final rendering before an international jury made up of renowned architects: Rodo Tisnado (France/Peru), Handel Guayasamin (Ecuador), Javier Escalante (Bolivia), Luis Longhi (Peru).

### **LANGUAGE**

Courses in French and Spanish throughout the semester

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<b>Code:</b>	<b>M.7.1 CTID729</b>	<b>ECTS credits :</b>	<b>3</b>
<b>Domain:</b>	<b>Inventing within the existing: Heritage and change</b>	Number of weeks :	14
<b>Teachers:</b>	F. PINATEL, C. DENNEULIN	Nber of hours / semester :	42
		Nber of hours / week :	3
		Personal work :	35

**CROSS-DISCIPLINARY COURSE INTRA-DOMAIN**  
**INDUSTRIAL HERITAGE: ART/ARCHITECTURE**

**OBJECTIVES**

In the course of the second half of the 20th century, everything that made the power base of the Nord-Pas de Calais in earlier centuries was gradually, then drastically challenged. Mining, steel-making, textiles, all drivers of regional and national growth, went through a major crisis. The industrial and social effects were great. Half of industrial jobs were lost between 1973 and the end of the 1990s.

A whole world disappeared, so people had to reinvent, on new bases, but without denying these diverse heritages... One of the main repercussions on the landscape of the Nord-Pas de Calais has been the multiplication of industrial brownlands, which are both heritages from a glorious past and the stigmata of crisis.

Destruction or reconversion? Decision-makers, elected officials, entrepreneurs, architects, artists and citizens endeavoured to limit the damage of different shocks, to valorize industrial heritage, to invent the future of the region.

Reconversion is underway, but the construction site is far from over. How can industrial ruins become places for culture, exchange, family outings, etc. How can we valorize industrial heritage?

**CONTENT**

Art and architecture are at the centre of important thinking about transformation of the industrial landscape in Europe, occupied brutally in the 19th century, today made up of sites that are still working and others that are abandoned, that have been either destroyed or rehabilitated. The Nord-Pas-de-Calais region has been seeking for several years to get out of its economic crisis by valorizing its industrial heritage. Once neglected brownlands, these traces are henceforward at the heart of the issues of redevelopment of the contemporary city that has to cope with challenges of density, improving transportation, the return of nature into the city, high social quality of life. In fact, this heritage is becoming capital and makes up the major support for the changes necessary to bring cities into the era of planetary responsibility.

**ORGANISATION**

Study trip to the Nord-Pas-de-Calais (3 days) 8, 9, 10 November 2018. Student immersion in different industrial sites either rehabilitated or abandoned in the region. Visit to the Union neighbourhood in Roubaix once occupied by industrial activities and transformed into an eco-neighbourhood, meeting with poet Charles Pennequin for a 'poelitical' walk in the industrial ruins, skiing on a former slag heap, immersion in desolate industrial landscapes of the town of Noeux-les-Mines.

Making drawings, photos, videos.

This work will be documentary and exploratory, and this immersion will give rise to a fiction.

**ASSESSMENT**

Continuous 50% final assignment 50%

**LANGUAGE**

Course language: French

Communication languages: French

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Code: **M.7.1 CTID730**

Domain: **Inventing within the existing: Heritage and change**

Teachers: L. ADRIAN ARANEDA, V. LAGUIA

**ECTS credits : 3**

Number of weeks : 14

Nber of hours / semester : 42

Nber of hours / week : 3

Personal work : 35

**CROSS-DISCIPLINARY COURSE INTRA-DOMAIN**  
**WAYS OF LOOKING AT THINGS, HERE AND THERE**

**OBJECTIVES**

Photography of Architecture !!!

Technical choices and their 'effects' on the aesthetics of the photographic image:

These courses in digital photography attempt to maintain a permanent link between practice and theory. We focus on practice that, when used spontaneously, enables discoveries and even more rigorous systematic exercises, allowing us to better understand theoretical and technical phenomena involved in photographing architecture.

In this course, it is often practice which makes it possible to better understand theory.

A photo and photographer consciously or unconsciously chooses:

The subject – the size of the picture – angle – focus – lighting – composition, presentation – shutter speed – shutter – light sensitivity (iso).

Each of these parameters modifies the totality of the photographic image in its plastic expression, hence in its meaning, in great part emotional.

**CONTENT**

Personalized plastic presentation of your photographic 'work'

Personal work involving the ensemble of technical means to produce a 'photographic work' (free or proposed subjects).

Panorama - polyptych - poster - sequences.

**ASSESSMENT**

60% Attendance and progress made

40% Presentation du travail at end of week ('photographic work')

**LANGUAGE**

Course language: French

Communication languages: French, Spanish



Code: **M.7.1 CTID732**

Domain: **Architecture of Milieux, Territories, Landscapes**

Teachers: D. COUILLARD

**ECTS credits : 1,5**

Number of weeks : 14

Nber of hours / semester : 21

Nber of hours / week : 1,5

Personal work : 18

**CROSS-DISCIPLINARY COURSE INTRA-DOMAIN**

**PAST.PRESENT/FUTURE :**

**ARCHITECTURE, URBANISM, LANDSCAPE AND LIGHT/SOUND.**

**OBJECTIVES**

The idea of design with 'light/sound' has changed with the developments in technologies, sculptural concepts, instruments and materials in art, social wealth, political will and other multiple factors. From the Middle Ages to the present, light has changed in materiality, plasticity, aesthetics, technology, energy, scale of dimension, power and energy. Light applied to landscape, urbanism, architecture at a particular time in a historical period, produces a particular identity revelatory of meanings, reflects arts and techniques of an era. Contemporary light / sound has become indissociable with image produced by animation, video, sound, 3-D sound, 3-D images, computer sciences, but also with space and the 'spatiality' of space. There is a new light / sound resulting from present technological developments and discoveries and from the contemporary meanings of the new urban and architectural spectacle of the city and landscape. The consequences of this transform the admissible traditions of pictures, traditional images of landscape, urbanism and architecture, offering new, unexpected, maximal or minimal appearances of light / sound. The ancient and contemporary history of arts and techniques are resources for future creation, complemented by fun futurologies! These are cultures that can serve the architect, since natural and artificial light imbues more than ever present creation and the utopia of the moment. Design space / time of light / sound ? Tomorrow's revolution was discovered yesterday.

**CONTENT**

Theoretical courses associated with relational light / sound experiences.  
 Examples of subjects developed: artistic and sculptural light concepts, architectures of light, urban public lighting, lighting furnishings, light in the Middle Ages, fireworks, Art-Deco style and lights on the cruise ship Normandie, sound and light shows, fibre optics, lasers, natural light and other subjects...  
 There will be sessions by experts from the French Association for Lighting and the Association of Lighting Designers and, if possible, a study trip to the 'Lyon Light Nights' around 8-9 December 2014.

**ORGANISATION**

A dossier of sculptural and technical design valorised by light, for a subject or site chosen by the student, is constructed and written up during the course.  
 The dossier will contain sculptural design, one or several night and day images of its creation, technical conception and plans, choice of materials and the way they work, the financial plan and associated elements, in relation to the specifics of the subject and the concept.

**ASSESSMENT**

Final assessment consists of 50% for the attendance/participation note and 50% for the dossier on light design.

**REQUIREMENT**

Previous to taking the course, students are required to read «Lumière et Ambiances» by Roger Narboni, Editions du Moniteur, available at the ENSAPLV library.

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**Code:** M.7.2 S701  
**Domain:** Arts and scenography  
**Teachers:** R. DE MARCO, O. JEUDY, L. FALZON, C. SZANTO, L. LOPEZ

**ECTS credits :** 4  
 Number of weeks : 14  
 Nber of hours / semester : 49  
 Nber of hours / week : 3.5  
 Personal work : 47

**THEMATIC SEMINAR**

**PLASTIC APPROACHES AND URBAN TERRITORIES**

**OBJECTIVES** This seminar proposes students do their mémoire work on the basis of an artistic practice carried out in an urban territory – a scale-1 material intervention and film work in urban locations. Various urban artistic approaches ahead of the project will be studied to show how these reveal architectural imaginaries, generating a potential for interpretations about the future calling of a territory.

**CONTENT** This research seminar deals more particularly with sculptural actions and experiments undertaken in urban, industrial and port wastelands, in urban or peri-urban areas in the process of being reclassified. Students are also encouraged to intervene on the physical materiality of these locations to bring out urban imaginaries, that is, other possible ways of inhabiting them. Real-life work on these areas and the theoretical process will be undertaken simultaneously. Artistic experiments will give rise to phenomenological reflection on action and perception, production of spaces, adaptation to the surrounding milieu.  
 This seminar also develops research on sound and visual representation practices for urban areas, as well as film and documentary editing. Through experimenting with various video-graphic representation and project dispositives, students will make a critical analysis of the scale transformations of perception they produce in terms of spatiality, temporality and urban imaginary.

**ORGANISATION** Courses, methodological workshops and research monitoring  
 Making a sculptural work and writing a pre-mémoire

**ASSESSMENT** Continuous assessment 50% and pre-mémoire 50%  
 Oral presentation of evening lectures

**REQUIREMENT** Licence degree

**Code:** M.7.2 S702  
**Domain:** Arts and scenography  
**Teachers:** M. MAZLOUMAN, J. GAUTEL, Y. KNEUSE

**ECTS credits :** 4  
 Number of weeks : 14  
 Nber of hours / semester : 49  
 Nber of hours / week : 3.5  
 Personal work : 47

## THEMATIC SEMINAR

### SCENOGRAPHY AND ARCHITECTURE: SCENOGRAPHY, AN ART OF PLACE

#### OBJECTIVES

Scenography is considered as a spatial art, in that it puts into form the representation space for a given work of art. Scenography treats the relation between the spectator and the art work in a symbolical context. Today, scenographers also work in other fields than theatre, such as museums, exhibits, fashion shows, gardens, architecture and public space. Scenography is a tool, enabling us to give form and create space for the imagination, not in a given and fixed space, but through the shift from real space to imaginary space and back.

#### CONTENT

Scenography is a spatial culture, and a conceptual tool for the architecture project. It includes theatre aesthetics, the stage, exhibition and museum scenography, at the crossroads of different artistic disciplines. We address theatre history and its important theories through the study of the spatial, aesthetic and symbolic evolution of theatre. We shall analyse scenography and its transformations linked to the evolution of various fields of space design and other art forms (visual arts, dance, music ...), architecture and public space. The lectures are divided into two parts: theatre scenography (study of a work's origin, text, directing, stage setting, performance venues and theatre architecture), and scenography beyond theatre (visual arts, installations, performance art, public art, exhibition spaces and other artistic "showcases", dance, video, hybrid theatre productions ...). Theatre plays, exhibition and museum visits and other excursions are part of the programme.

#### ORGANISATION

theatre scenography and stage settings; theatre architecture; new types of art spaces; cultural politics; scenography and visual arts; dance; "Tanztheater" and hybrid performance forms, use of video; public art / public commissions; museography and exhibition scenography.

Methodology lectures and dissertation assistance are offered following several axes such as (the list is not exhaustive and can evolve, according to the proposed subjects):

- scenographical conception;
- representation space, represented space, imaginary space;
- the onlooker, the looked upon / the spectator, the actor, the work;
- questions linked to scenography and art spaces, museums, exhibitions;
- public art in urban space;
- contemporary art in its scenographical dimension.

#### LANGUAGE

Course in French  
 Communication languages: English, German

**Code:** M.7.2 S703  
**Domain:** Arts and scenography  
**Teachers:** F. PINATEL, H. REIP, M. NEGRO, E. RESTREPO RESTREPO, M. SAIDI SHAROZ

**ECTS credits :** 4  
 Number of weeks : 14  
 Nber of hours / semester : 49  
 Nber of hours / week : 3.5  
 Personal work : 47

**THEMATIC SEMINAR**  
**ART, CINEMA, ARCHITECTURE**

**OBJECTIVES**

How do art and the cinema enable us to write the thinking of architecture?  
 This seminar is aimed at students wishing to take up research in the cinema on architecture, the city and landscape. Cinematographic practices form the basis of the reflection proposed in the seminar, during which they will be enriched by investigation in the field of visual arts and philosophy.  
 The seminar will provide the framework for thinking and discussion accompanying the creation of mémoire-films in the form of a film linked with written work.

**CONTENT**

Although complicities between art and landscape go back to immemorial times, preoccupations with the urban landscape are more recent. Among others, photography and cinema are contemporary observatories of the metropolis-city and provide a fertile soil both to understand ‘what is already there’ and how to think about what it can become. These narrativisations of territory act as seismographs for human-place relations. The city beholds us as we behold the city. This double movement entails a part of oneself inherent in any way of seeing and leads to reconsideration of the narrative as a hinge point in our relation to the world. Considered as a gesture at once aesthetic and political, how can art and the cinema approach these issues of place, of elsewhere, of hospitality?

By favouring a critical analysis, situating the works studied and confronting them with other works and other discourses, the students will be provided with the means to exercise their thinking and will be encouraged to establish their own linkages and abilities to compare, to carry out their own research on the basis of leads brought up by the course.

It will be paramount, from the very beginning of the course, to distinguish among the fields and realms of visibilities, that which is of the order of the image and of the order of the visual. This means making a precise distinction, not between tools (35mm camera, digital camera, camera), nor between means (silver emulsion or digital), nor between stills and moving pictures, nor even between the various categories (fiction, documentary, experimental, installation), but between the image and all sorts of imagery. The image at issue here is the one that ‘increases the capacity to act’, thus, the power of thinking in the person who receives it and not that power which comes to him or her through the power of fascination.

Watching works together that are connected to the issues raised by the course will also enable us to examine the passage from iconic to oral, spoken language and to develop students’ capacity to read a work beyond the interpretation they make. That is, learn to situate discourse in a pre-existing symbolic order rather than abandon it to the grasp of the imaginary. Listening to what the other says will provide a valued point in understanding the circulation of meaning represented by the cinematographic image.

**ORGANISATION**

- Pre-mémoire: research of thematic axes, formulation of research subject, setting up biblio-filmography
- Reading notes for the works studied in the course

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Code: **M.7.2 S704**

Domain: **Living in urban worlds**

Teachers: E. AMOUGOU, S. WACHTER, Y. GOURVIL, C. ORIOL

**ECTS credits : 4**

Number of weeks : 14

Nber of hours / semester : 49

Nber of hours / week : 3.5

Personal work : 47

## THEMATIC SEMINAR

### APUS SEMINAR (ARCHITECTURE, URBAN PROJECT AND SOCIETIES)

#### OBJECTIVES

The goal is to build a personal approach to architectural and urban issues as well as social and spatial matter; to identify the issues that such an approach can rise, in regard to current debates and to evaluate critically the gathered knowledge (theory, methods, etc.); to venture out in a pathway towards the creation of a thesis, using methods in relation to the chosen topic; to develop one's work by having a reflexive approach to concrete situation concerning urban transformations.

#### CONTENT

This cross-disciplinary course, put together by professors, architects, town-planners and sociologists, deals with the urban space creation process at all levels, in an international context, and marked by social and environmental processes. The focus is on the relation between architecture, urban project and societies, dealing particularly with the interactions between spaces-actors-societies, renewed spatial practices, modes of production in architecture and urban ensembles. Regarding their thesis, students are encouraged to develop an original and personal field-based approach, and thus to favour a study plan or a work plan that focus on archives statistics, interviews, observations, data etc. as a primary source.

Thematic half-day meetings (potentially open to the whole school) bring together students, a group of presenting students, processors, and guests around topical issues : consultation and participation, architectural and urban planning, tangible and intangible heritages issues, the importance of public spaces and social issues in the project, urban motilities, city professions etc. These half-day meetings could be brought into line with other courses (AEDD etc.) and are grounded on each of the three main axis of the class, themselves grounded on research productions and on the school's in depth topics : " city, habitat and society".

- URBAN PROJECT AND FORECASTING ; in charge : S. Wachter
- HERITAGE, CITY AND ARCHITECTURE ; in charge : E. Amougou

This course is based on a shared research process with the AEDD course. Students who wish to take this course are assessed at the end of the Semester 9 and then go on un their Semester 10 with the research option Sogo6 ( in charge : J. Zetlaoui-Léger, L. Héland, S. Wachter, E. Amougou)

The course and the research path are based on the partnership with doctoral schools and a one the school's research laboratory :Laboratoire Espaces Travail (LET).

#### ORGANISATION

The course is structured in two parts:

1. Thematic half-day meetings, every other week.
2. A follow up on the researches made for the thesis for every axis of the course, and follow actual production steps every other week.

Most of the working time is dedicated to the elaboration of the step thesis : field work surveys, analysis and use of data gathered, connexion with the analytical framework, creation on an in depth bibliography, assessment of the work carried out and to be done.

#### ASSESSMENT

Attendance ; participation in exchanges : book reviews ; validation of the preliminary-thesis steps 40% of continuous assessment and 60% for the final work (preliminary-thesis)

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**Code:** M.7.2 S705  
**Domain:** Living in urban worlds  
**Teachers:** A. D'ORAZIO, E. MACAIRE, V. ZAMANT

**ECTS credits :** 4  
 Number of weeks : 14  
 Nber of hours / semester : 49  
 Nber of hours / week : 3.5  
 Personal work : 47

**THEMATIC SEMINAR**  
**HABITAT AND SUSTAINABLE CITY, FOR A CRITICAL APPROACH**  
**TO MAKING THE URBAN**

**OBJECTIVES** The aim of this seminar is to present a first broad look at the environmental and sustainable development issues concerning architecture and urbanism from the standpoint of both theoretical/conceptual and professional practice approaches. Throughout the seminar, this will enable students to define a research subject to investigate in depth in semesters 8 and 9 to produce their mémoire. This work will be carried out progressively throughout the master's cycle. For 2014-2014, the subject proposed is «The energy transition: what actors and projects for the territory?»

**CONTENT** This course will be a locus of group reflection on strategic choices and methods that contribute to urban and architectural conception: how to think about management of spaces as regards the environmental and climatic issues? What professional, citizen and political competences are built up and transformed through this?  
 On the basis of analysis of architectural and urban practices, both in France and abroad, students will investigate the way disciplines developed in their technical, economic and social dimensions. We shall elucidate avenues for reflection and more in-depth work relating to new imperatives (climate and energy constraints, exit from fossil fuels, urban resilience...). Frameworks and methods of production (making eco-neighbourhoods, producing ecological architecture, diffusing the participative model for various actors in the processes of design and management...) will be investigated through a resolutely critical and comprehensive approach.

**ORGANISATION**

- Active participation in theoretical and lecture-course offerings.
- Making a reading log.
- A pre-mémoire (definition of a subject and a problematic, presentation of a working method, bibliography).
- Linked to the optional course SOIR Co-Construction of an Alphabet of Sustainable Development and Ecological Transition.

Class load: 2 hours lecture course + 1.5 hours methodological workshop and group monitoring.

**ASSESSMENT** Continuous assessment 40%, pre-mémoire 60%

**Code:** M.7.2 S707  
**Domain:** Architecture of Milieux, Territories, Landscapes  
**Teachers:** R. DEMARCO, C. LUXEMBOURG, O. JEUDY, C. LEBARBÉY, C. ZAHARIA

**ECTS credits :** 4  
 Number of weeks : 14  
 Nber of hours / semester : 49  
 Nber of hours / week : 3.5  
 Personal work : 47

## THEMATIC SEMINAR

### ARCHITECTURE/S AND LANDSCAPE/S: FUNDAMENTALS

#### OBJECTIVES

Acquire the bases for a landscape culture through the diversity of approaches applied to it and their architectural pertinence.  
 Explore the contributions of thinking on landscapes in the conception and carrying out of projects transforming areas: architectural projects, urban projects, artistic projects, territorial projects, landscape projects, etc.  
 Investigate the cultural models underwriting contemporary policies on territorial management, ‘landscaping’, sustainable development.

#### CONTENT

A term invented to refer to all or a part of a painted image, landscape today unceasingly shapes and informs management of contemporary spaces, whether they be extraordinary or ordinary, exceptional or everyday. Its importance, today taken for granted in projecting what places will be become, necessitates an adequate training in the complexity involved, in the renewal of architectural and urban practices it has entailed, in the shift in territorial and environmental issues it has brought about. The seminar ‘Architecture/s and Landscape/s’ thus proposes training over three semesters at the end of which students will possess sufficient bases to think out and project architecture, city and landscape together.

The first semester of the seminar will offer an initial encounter with this field. First, to take up the notion of landscape, its relations with other notions (space, site, place, milieu, environment, territory, nature, garden...), the fields it is used in, its potentials for invention and creation, in order to understand its pertinence and contributions to the very act of architectural and urban conception. Later, we shall take up analyses of concrete realities, both political and spatial, territorial and environmental, within which this notion is utilised. Presentation of case studies taken from key times in the history of landscape, from the Renaissance to our own day, will enable students to better understand the sources of the new emergence of landscape.

Fieldwork will be carried out in the Ermenonville domain and its surroundings, a showplace of French 18th-century landscape conceptions in direct confrontation to the principles of landscape architecture in Great Britain. This will enable students to see, in situ, how this domain was constructed from its design right up to its most recent transformations, as well as the heritage, urban and landscape stakes involved in the vast regional and inter-regional area it is located in.

In line with the seminar and the option ‘initiation to research’, students will be supervised and accompanied in the elaboration of their mémoire and end-of-studies subject.

#### ORGANISATION

The seminar (28 hours) is organised around presentations given by the team members of ‘Landscape’ and outside guests active in multi-disciplinary fields of landscape, architecture, the city, but also in the arts, sciences and letters. It will provide a forum of debat on the fundamentals of landscape.  
 Mémoire monitoring (21 hours) will be carried out in group sessions complementary to the option ‘Landscape/s: initiation to research’.

#### ASSESSMENT

Participation in courses and debates.  
 Summary dossier on contributions of the seminar plus those of the obligatory evening lectures linked to the mémoire subject.  
 Oral presentation of the evening lectures.

<b>Code:</b>	<b>M.7.2 S708</b>	<b>ECTS credits :</b>	<b>4</b>
<b>Domain:</b>	<b>Architecture of Milieux, Territories, Landscapes</b>	Number of weeks :	14
<b>Teachers:</b>	X. BONNAUD, A. FREMY, D. SZUTER, C. BODART, D. DELMOND	Nber of hours / semester :	49
		Nber of hours / week :	3.5
		Personal work :	47

## THEMATIC SEMINAR

### INHABITED AREAS' ARCHITECTURE : PHILOSOPHY, ARCHITECTURE, URBAN

#### OBJECTIVES

The paradoxical situations entailed by contemporary ways of inhabiting, the blurring of traditional spatial and temporal borders, the emergence of a unique environmental crisis, all oblige us to redefine the representations capable of critically analysing these changes. The seminar aims at gradually constructing an idea of what will become of these inhabited milieux, facing a double pressure: the necessity of conserving, inheriting, and that of still moving forward towards inhabitable horizons.

Architects, urbanists, sculptors, all intervene in a complex milieu, an overlapping of material and intangible elements, set in motion by the relations humans establish with them and the memories that run through them. The objective of the seminar is to take up – in the light of the paradoxes of the notions of contemporaneity and of project – the terms that make up this complexity of acting in a place/milieu.

#### CONTENT

If being modern, with the Athens Charter, meant favouring the 'tabula rasa' and freeing oneself from the context, today's challenge consists in imagining other possibilities based on the resistances and resources of milieux and places, demanding we understand the interactions and naturo-cultural dynamics of interpenetrations, interdependences, inter-creation, co-rhythms, be it concerning climate, mechanical, chemical, biotic or cultural factors.

In order to 'make a world' by vehiculating cultural aspects, yet without betraying nature, it is hence necessary to be aware of the impacts of separational thought and to replace it with reliance thought. In philosophy, looking forward to a 'return to things themselves', to the sources of the incarnated presence of the world, phenomenology radically refutes the separation introduced between subject and object. Through the body, each person is articulated to the world in the immediacy of encounter, contact before all objectivation: this aspect was often forgotten by the thinking that represented humankind as subject confronting objects and distanced from the environment. This fundamental aspect of experience, the importance of immediacy, enables us to emphasise one of the flaws in the modern system that must be repaired by a new way of 'doing the project'.

The hypothesis that we formulate for this Semester 7 is that reliance is an operational way of thinking enabling us to elucidate the cultures of territorial, urban and architectural conceptions, but also of finding ones bearings in the theories that found them.

Hence, we must observe the reconfigurations linking local and global, which can encourage productions including relationships of another sort, more creative and responsible, between nature and technique, geographic, social and cultural contexts.

#### ORGANISATION

1/ Seminar:

- Place/milieu, nature/culture: Chris Younès, Xavier Bonnaud
- Heritage and creations: heritage and project, Antonella Tufano
- Project, preserve, innovate: Edouard Ropars, Thibaud Babled
- Processes of transformation: Didier Rebois

2/ Regular and personalised monitoring of memoires in small groups : Xavier Bonnaud, Antonella Tufano

#### ASSESSMENT

Personal investment and regular presence required in all sessions, along with regular reporting on work done and oral presentation of progress in the research subject



**Code:** M.7.2 S709  
**Domain:** Architecture of Milieux, Territories, Landscapes  
**Teachers:** C. PEDELAHORE, J. JAUPITRE, V. LAGUIA

**ECTS credits :** 4  
 Number of weeks : 14  
 Nber of hours / semester : 49  
 Nber of hours / week : 3.5  
 Personal work : 47

**THEMATIC SEMINAR**  
**SUSTAINABLE FACTORY OF ALL WORLD**

**OBJECTIVES**

This seminar has a double objective:  
 Firstly, as a group, that of constructing analytical and critical thinking about international human spatial productions and their changes over the long term.  
 Secondly, individual, that of the workshop, which is patient and cumulative, in producing the master's mémoire on the basis of a reasoned construction of a specific subject and problematic, a referenced corpus, and a working attitude appropriate to each student.

**CONTENT**

This seminar is based on a double perspective, both theoretical and practical:  
 - That of the inseparability of scales in the production of anthropised spaces, from the most domestic of knowledge and practices right on to how the urban and great international metropolitan territories are produced in the most concrete and diversified ways.  
 - That of the cutting edge understanding of spatial and social complexity of human productions, both sedimentary and hybrid, material and intangible: archetypes, models, cultures, logics and dynamics of transmutation, all in a systemic fashion at the scale of long bilateral exchanges between identities and cultures in the great areas of world civilisations: Mediterranean, Asia, Latin America, Middle East, Africa.

**METHODS**

The approaches, which will be presented and illustrated, are those developed in urban and architectural scientific research into pluridisciplinary and intercultural procedures.  
 They are articulated in the form of specific reflex, retrospective and comparative analyses.  
 These approaches thus make up the toolkit of in-depth knowledge, both of the diversity and the universality of productions and spatial cultures – learned as well as popular – on the scale of intercontinental metropolisation recognised as a major human civilisational phenomenon.

**ORGANISATION**

Work required:  
 - Course and reading notes to identify and construct an object of research and a personal awareness of the issues involved.  
 - A thematic dossier as preparation for the corpus of the individual mémoire.

**ASSESSMENT**

- Course and reading notes  
 - A thematic dossier

**LANGUAGE**

Course given in French  
 Languages of communication: French, Spanish, English, Portuguese, Italian, Vietnamese.

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Code: **M.7.2 S710**  
 Domain: **Conceive and Construct architecture**  
 Teachers: S. BALEZ, D. HAMANI, N. BELKADI, M. LEYRAL, G. FAAS, V. COMITO

**ECTS credits : 4**  
 Number of weeks : 14  
 Nber of hours / semester : 49  
 Nber of hours / week : 3.5  
 Personal work : 47

**THEMATIC SEMINAR**

**CONSTRUCTIVE PRACTICES OF THE ARCHITECTURAL PROJECT,  
 CRITICAL AND PROSPECTIVE PERSPECTIVES**

**OBJECTIVES** This seminar initiates the work which has to end in the production of a report at the end of the Master’s degree cycle. The objective during this semester thus is to enable students to :

- Determine the domain of study and the nature of the report that they will develop,
- Gather the useful «materials» around the constitution of a bibliography,
- Identify the questions and develop a problematic through the production of a first model of the report.

**CONTENT** From the beginning of their research, students are encouraged to connect their report subject to their PFE (final project) subject, so as to make their personal work coherent between reflection and proposal of project. The report then becomes the theoretical contribution feeding the PFE. Problems which can be treated in this seminar are, as a consequence, diverse and touch rather wide thematic domains. Nevertheless, they will share a general framework bound to the approach of project which relies on the double point of view which considers the architectural project :

- As a long process, marked by highlights, from programming (and even still upstream from an architectural and urban diagnosis) to realisation and the returns of operational exploitation, an inevitably iterative process to manage its complexity and its time evolution.
- As a collaborative work bringing in numerous actors, work necessary to respond to its heterogeneous and multidisciplinary character.

The seminar suggests deepening these two points of view by providing a critical and forward-looking examination of current practices. The educational objective is to bring the students:

- To know better the other actors, their legitimacy and their work (various contracting authorities, engineering consulting firms, specialised engineering consultants, industrialists...), to think about the specific contribution of the project management (and of the architect within this) and on the role towards the other actors,
- To ponder the question of the project management («management of the project »),
- To discover where and how the determining and founding decisions for the project are made.

**ORGANISATION** At the end of the semester: students should produce a document containing the work developed during the period: title, pre-problem, commented bibliography accompanied with reading index cards, first iconographic basis, possibly first results of the work (for example report of interview) and work plan for following both semesters.

**ASSESSMENT** Continuous assessment: 50 % (participation in the seminar) - Evaluation of the final document: 50 %.

**Code:** M.7.2 S711  
**Domain:** Conceive and Construct architecture  
**Teachers:** P. CHABARD, S. DESCAT, L. DESTOMBES

**ECTS credits :** 4  
 Number of weeks : 14  
 Nber of hours / semester : 49  
 Nber of hours / week : 3.5  
 Personal work : 47

## THEMATIC SEMINAR

### CRITICAL AND HISTORICAL APPROACH OF ARCHITECTURE AND CITY

#### OBJECTIVES

This seminar proposes to analyse modern and contemporary architecture with the tools of history. More exactly, it will explore discourses on architecture (be this discourse of a theoretical, historical or critical nature), on how they are created and the links they maintain not only with the material support involved (books, journals, exhibits, etc.), but also with the practice of architecture itself.

The seminar will develop along the lines of three axes of teaching and research: specific reflection on criticism, analysis of forms and processes of mediatisation of architecture, a historiographical approach to architecture and the city.

Through the question of critique, theory and history, the seminar will emphasise the question of writing and the links between writing and architecture. In this perspective, we envision the mémoire itself not only as a research experience, but also as a writing experience for the students. Although this experience involves a framework of specific constraints and demands, it will also enable students to construct through writing (and, in this case, historiographical writing) a reflexive and critical relationship with architecture, that is, acquire the intellectual autonomy necessary for an enlightened practice of architecture.

#### CONTENT

The first axis will involve thinking about criticism, its history and relation to architectural design, including investigating the boundaries of criticism and other discursive forms (history, theory). Criticism today raises many questions, although it does not cover any one discipline or precise practice, taking on various forms running from current events to 'judgment' of the aesthetic value or use value of projects, and on to the construction of 'learned' interpretations. Criticism thus requires detailed study, notably about its modalities but also of its relationship to architectural conception.

The second axis addresses publication, mediatisation and diffusion of architecture. Publication is understood in its broadest sense: that is, books, written press, exhibits, but also all new media. We shall analyse the importance of these mediatisation processes in building theoretical and critical positions. We shall not only investigate the construction of these discourses, but also their material aspect (visual disposition of an exhibit or a book, organisation of discourses in the space of a page or an exhibit space, etc.) and, fundamentally, the architecture of discourse.

The third axis of the seminar starts with the hypothesis that history has a history, that it is not an abstract and universal discourse, but, on the contrary, highly dependent on the temporal context in which the historian works and the theoretical and practical debates that enliven the scene of architecture at that given time, hence the necessity of this historiographical approach (emphasising how history is written in each period).

#### ORGANISATION

Built up on the optional course of initiation to research methods, this first semester of the seminar will lead to writing a pre-mémoire. In this objective, work will be focused on exploratory research, constructing a problematic, elaborating a state-of-the-art report and choosing a research area.

**Code:** M.7.2 S712  
**Domain:** Conceive and Construct architecture  
**Teachers:** F. GUÉNA, A. TUSCHER, J. SILVESTRE

**ECTS credits :** 4  
 Number of weeks : 14  
 Nber of hours / semester : 49  
 Nber of hours / week : 3.5  
 Personal work : 47

## THEMATIC SEMINAR

### ACTIVITIES AND INSTRUMENTATION OF CONCEPTION

#### OBJECTIVES

Conception activities involve using many implements (maquettes, sketches, digital models, prototyping, etc.). The objective of this seminar is to examine the place of digital technology in conception activities.

Today, discourse and practices concerning digital technologies and architecture are multiple: Computational Design, conception-fabrication continuum, BIM (building information modeling), Parametricism, biomimetics, digital architecture, etc. In this seminar, we propose to develop a critical view of these practices.

On the one hand, this is a question of becoming aware of cognitive operations (mental activities) that constitute the work of architectural design and, on the other hand, studying the places, roles, uses and influences of the various tools that orchestrate them.

The knowledge this seminar calls upon are of two kinds: 1) design sciences and 2) digital modelization of architecture.

#### CONTENT

The course is shaped as a reflexive workshop that will develop over three phases:

- a theoretical course providing students with knowledge anchored in sciences of architectural design and computer sciences applied to architecture.
- a production and presentation phase for research work developed by the teachers and students.
- a debate phase concerning the objects taken up by each participant.

Each session takes place according to the three phases above.

In semester 7, we will examine how some architects appropriated computer sciences and how digital technology orchestrates their design activity. This provides the basis for the pre-memoire to be developed following a problematic note prepared together (and to be turned in at the end of the semester).

A dedicated website will enable exchange between teachers and students.

#### ASSESSMENT

Continuous assessment and evaluation of the problematic note.

#### WORK REQUIRED

An exercise on analyzing a case study of digital architectural design.

A problematic note for the mémoire, presenting a scientific investigation, a bibliographical study and study of the research methodology envisioned.

A website at the students' disposal will provide course content as well as documents and methodological tools necessary to compose the mémoire.

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<b>Code:</b>	<b>M.7.2 S713</b>	<b>ECTS credits :</b>	<b>4</b>
<b>Domain:</b>	<b>Inventing within the existing: Heritage and change</b>	Number of weeks :	14
<b>Teachers:</b>	K. BOWIE, C. MAUMI, L. BASSIÈRES	Nber of hours / semester :	49
		Nber of hours / week :	3.5
		Personal work :	47

## THEMATIC SEMINAR

### HISTORY AND PRACTICES: TRANSFORMATIONS OF THE BUILT FRAMEWORK

<b>OBJECTIVES</b>	<p>What should we conserve? On the basis of what criteria? What is the logic underlying present regulations? How can we combine today conservation, appropriation and invention and how do these notions and practices dovetail concretely in various periods? This course proposes to both demystify the field and enable students to acquire the competence and knowledge to pursue a career in it. The course will also develop knowledge about objects and sites undergoing change, that may well be considered 'heritage' sites in the future.</p>
<b>CONTENT</b>	<p>The seminar will utilise chiefly historical approaches to elucidate the heritage field in all its aspects (technical, social and cultural) and dimensions (building, 'city', territory). It will deal with the questions of densification of city centres and 'new heritage' (industrial, railway, 20th-century, peri-urban landscapes, etc). We aim to cast light on how decisions are made, on the actors involved, the terms and conditions of debate, the values called upon, application modes and application of policies adopted, through critical readings, analysis of selected cases and guest specialist interventions on subjects such as:</p> <ul style="list-style-type: none"> <li>- Emergence of the notion of heritage and regulation of its protection</li> <li>- Nature and influence of certain key texts (Riegl, Giovanonni, etc.)</li> <li>- Organisation of heritage protection services, investigating and decisional authorities</li> <li>- Analysis of concrete cases of application: safeguarded sectors, local urbanisation plans, inventory operations</li> <li>- Presentation of rehabilitation projects for railway heritage and large housing complexes</li> <li>- Extra-European heritages</li> </ul> <p>The seminar also aims at examining concrete practices in transforming buildings by comparing the approaches of historians and practitioners who intervene in their turn. Through a choice of specific case studies, both older and contemporary, of building transformations, we shall examine the strategies adopted, the role of various actors and the how work was actually carried out.</p>
<b>ORGANISATION</b>	<p>Organised in the form of 'seminar/courses', there will be alternating sessions of debate on critical reading of key texts, lectures by the teaching team or invited guests, and visits to sites or building sites. Each session also includes group monitoring of memoirs.</p> <p>Aside from the mémoire, students will be required to make logs on their reading, oral presentations (participation in the debates, presentation of their work-in-progress) and hand in a 'pre-mémoire' at the end of the semester.</p>
<b>ASSESSMENT</b>	<p>Assessment through supervised work and regular presentation of progress on the mémoire.</p>

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Code: **M.7.2 HA701**

Teachers: L. BASSIERES

**ECTS credits : 2**

Number of weeks : 14

Nber of hours / semester : 21

Nber of hours / week : 1,5

Personal work : 23

## HISTORY

### A HISTORY OF HERITAGE, 19TH-21TH CENTURIES

#### OBJECTIVES

Preserving heritage has entered the heart of contemporary policies and architects educated today will all be confronted in some way or another with the heritage question, either for restoration, rehabilitation or re-use.

This course will take up the notion of heritage from a historical and speculative angle, outside questions of an operational order (intervention techniques, heritage expertising, etc.), by casting light on the construction of our relationship with existing buildings and its development over the course of the last two centuries.

#### CONTENT

Institutional, legislative and cultural history of the emergence and development of heritage protection will be examined here at different scales – architectural, urban, territorial, focusing on France from the first heritage protection measures to today, but we shall also look at other geographical areas to reveal specific issues such as exchange and influences, as well as the dynamic partaking in universalization of the notion since the middle of the 20th century.

#### ORGANISATION

The semester will begin with an introduction to the notion of heritage and will be organised around three broad themes:

- The invention of the historical monument in the 19th century: birth of the institution, examples of restorations, setting up legislation;
- Taking the city and modernity into account in the 20th century: extension of protection to sites, destructions and reconstructions following international conflicts;
- «Heritage as a whole» of the 21st century: from national to universal heritage, «from the cathedral to the teaspoon».

#### ASSESSMENT

Study of heritage history of a place (street, neighbourhood, built ensemble) defined by the student.

This will involve carrying out a study on the existing protections for the chosen site and highlighting the projects, debates and struggles that, over time, determined the setting up, elimination or development of these protections. In this perspective, the student will locate and utilize existing sources – digital, cartographic, archival... in order to analyse and compare them.

Assignment to be handed in at the end as a file compiled over the semester.

#### LANGUAGE

Course language: French

Communication languages: French, English

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Code: **M.7.2 HA702**

Teachers: P. CHABARD

**ECTS credits : 2**

Number of weeks : 14

Nber of hours / semester : 21

Nber of hours / week : 1,5

Personal work : 23

## HISTORY

### IMMEDIATE HISTORY OF A CENTURY'S END

#### OBJECTIVES

'Immediate history of a century's end: contemporary architecture on exhibit (1965-2005)'

Combining the history of ideas and the history of objects, this course proposes a critical history of contemporary architecture through a special prism: the main exhibits that marked the last third of the 20th century, from the mid-1960s to the turn of the century. Especially numerous during this period, these exhibits make for a privileged field of observation of debates and discourses, tendencies and turning points, ephemeral modes as well as more structural transformations that enlivened this field and which architecture today has inherited. The course most particularly deals with "post-modernity", both as a passing architectural fashion and as a more chronic historical condition. Through a critical history, hence highly thematized, this course attempts to explore some recurrent features of the relationship of architects to this "post-modern condition". The transversal themes of the course are: relationship with modernity (or in any case, with its rhetoric); relationship with time (present, history, memory, fashion, etc.); autonomy or heteronomy of architecture; architecture as product and as profession.

#### CONTENT

1. Architecture et culpabilité : crises du projet  
Exposition : B. Rudovsky, « Architecture Without Architects », New York, 1964.
2. De la disparition de l'architecture : les architectures radicales  
Exposition : E. Ambasz, « The new domestic landscape », New York, 1972.
3. Les ambiguïtés de la raison : l'architecture néo-rationnelle  
Exposition : A. Rossi, E. Bonfanti, et al., Architettura Razionale, Milan, 1973.
4. A la recherche du genius loci  
Exposition : « Roma Interrotta », Rome, 1978.
5. Présences de l'histoire : les usages du passé de l'architecture  
Exposition : P. Portoghesi, « La Presenza del Passato », Venise, 1980.
6. Réactions néo-modernes  
Expositions : P. Chemetov, « Modernité : un projet inachevé », Paris, 1982.
7. Le dessin d'architecture surexposé  
Exposition : J. Dethier, « Images et Imaginaires d'architecture », Paris, 1984.
8. L'invention de nouvelles avant-gardes  
Exposition : Ph. Johnson, M. Wigley, « Deconstructivist Architecture », New York, 1988.
9. Vers un nouveau classicisme ?  
Exposition : G. Tagliavanti, L. O'Connor, « A Vision of Europe », Bologne, 1992.
10. Architecture phénoménales  
Exposition : T. Riley, « Light Construction », New York, 1994.
11. Les architectes non-standard  
Exposition : F. Migayrou, « Architecture non-standard », Paris, 2004.
12. Actualités du postmodernisme  
Exposition : I. Flagge, « Postmodern Revisited », Francfort, 2004.

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Code: **M.7.2 HA703**

Teachers: C. MAUMI

**ECTS credits : 2**

Number of weeks : 14

Nber of hours / semester : 21

Nber of hours / week : 1,5

Personal work : 23

## HISTORY

### A HISTORY OF THE HUMAN ENVIRONMENT

#### OBJECTIVES

The main thrust of the course is aimed at establishing a critical distance towards current discourse in the name of sustainable development by looking back to examine thinking developed as early as the 19th century to bring in a more respectful relation between human beings and their life environment. This will be done through analysis of founding texts, but also through projects formulating another way of living in our common house, the Earth, calling most often for consideration of ecosystems and potentials inherent in a territory, the way they can be supportive of economic and human activities that respect the resources they represent, all the while favouring organization of a coherent and harmonious community.

#### CONTENT

The course could have been entitled 'The House We Live In' – that house being the Earth, home to all of us, in reference to the television programme designed by Ian McHarg as a public "extension" of the course "Man and Environmen" that he gave from 1957 on at the University of Pennsylvania to train environmental planners. As a matter of fact, if the impact of the human footprint on the Earth environment is self-evident to us today and indisputable, history teaches us that there were many invitations to this awareness that were long ignored by the majority.

For example, George Perkins Marsh emphasized as early as 1864 in Man and Nature the role of "mankind as an active geological agent", thus worrying for the future of humanity, seeing the extent to which people changed their environment, on which they depended for their well-being and health.

The major lesson of his approach, combining geography and history, demonstrates the necessity of thinking in the long-term: the "longue durée" of the history of territories and ways of living in them, but also the impact of human activity on the Earth.

Since then, environmental history, as defined by William Cronon, has convinced us of the necessity of bypassing disciplinary borders and mobilizing contributions from different fields (anthropology, ecology, economy, geography, etc.) so as to enable us to decode the relations between human beings and their environment over time.

The interest of this sort of approach for those who design / conceive of spaces – architects, urbanists, landscape designers – invites us to think about questions of land (its nature, status, ownership), resources, energy, climate, so many points that are also linked to economics and politics and which guided the way people move about, settle down, build and artificialize their environment and "made" society.

This also requires that we stop to look carefully at the development of human / nature relations (or nature-culture) with the problematics current in our 21st century.

In order to do this, the course holds the fundamental 19th-century texts (and even from before) up to 21st-century problematics for comparison and also explores the thinking and project approaches that underlaid thinking over the 20th century (running, for example, from Kropotkine to Geddes, from MacKaye to McHarg, even including Magnaghi or Hopkins today with the transition towns).

The objective of the course is to develop critical thinking; in fact, many observations have existed for a long time, as well as some solutions to them. The environmental issue is above all political and ethical, and architects must take this on.

Most of the references used are Anglo-Saxon.

#### ASSESSMENT

Each student must write an article (about 25,000 signs), highly referenced, on the basis of one of the articles, works or projects that will be dealt with in the course.

#### WORK REQUIRED

Work will be regularly reviewed during the semester to make sure the writing of the article is progressing suitably.

#### LANGUAGE

Course language: French

Communication languages: French, English



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Code: **M.7.2 HA704**

Teachers: B. NAVINER

**ECTS credits : 2**

Number of weeks : 14

Nber of hours / semester : 21

Nber of hours / week : 1,5

Personal work : 23

## HISTORY

### HISTORY OF GARDENS AND URBAN GREEN SITES

#### OBJECTIVES

Gardens accompany architecture, extend the city, transform it, and architecture can seek valuable lessons in the study of gardens for how to manage space and present it.

This course proposes to extend the historical field to gardens and urban green sites with two objectives:

- develop a spirit of curiosity through examination of a field of studies that encourages (re)discovering the relations between the garden and the city and the multiple forms of vegetal presence in the city
- associating several ways of exploring: direct observation through visits, reading literary and historical texts, analyzing graphic or pictorial representations.

#### CONTENT

The course framework (14 sessions of 1.5 hours each) means we must limit our study to Western-style gardens and propose an approach that cannot be exhaustive but provides bearings and keys to understanding the place and present-day forms of gardens.

After a quick look at older periods (Antiquity, Middle Ages) and Islamic gardens, we will study Italian Renaissance gardens and the spread of garden art throughout Europe: the gardens of absolutism and their extensions into the city, then the major turning point represented by the Enlightenment with the emergence of the picturesque garden and a new way of seeing nature; the 19th century and opening gardens up to everyone, bringing natural landscape into the city, all the while as show window for progress and technical and scientific discoveries; Modernity and gardens characterized by innovations and highly diverse currents of thought; the contemporary period and its wealth of forms and new approaches (especially social and ecological) implemented in the creation of gardens, parks, walkways in the contemporary city.

For each of the periods examined, we will note the historical context and the actors in garden creation; composition, décor and garden plants; some exemplary gardens and how they are used.

As a complement to the courses, there will be visits to parks and gardens in Paris and the Ile-de-France: Vaux-le-Vicomte / Domaine de Chantilly / Petit Parc de Versailles and the Potager du Roi / Trianon and Hameau de la Reine / Parc Monceau, Square des Batignolles and Parc Clichy-Batignolles / Parc André Citroën, Jardin du musée du Quai Branly, Parc Montsouris, Parc Floral, Jardin des Plantes, etc.

Some of the visits will be organized directly in relation to the course and will be all day Saturday. Other visits will be left up to the students' own initiative.

#### ASSESSMENT

Continuous assessment 50% and final exam 50%

Catch-up possible (if necessary) with a written exam

#### WORK REQUIRED

The main work is directly linked to the course and visits in the form of a visit notebook that should take an in-depth look at the history of gardens with your observations, drawings, reading, analysis of documents, so at least one visit is obligatory.

#### LANGUAGE

Course language: French

Communication languages: French, English, Spanish

Erasmus students are welcome in this course and work may be done in French, English or Spanish. Nonetheless, it is indispensable to understand French well.

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Code: **M.7.2 HA705**

Teachers: L. DESTOMBES

**ECTS credits : 2**

Number of weeks : 14

Nber of hours / semester : 21

Nber of hours / week : 1,5

Personal work : 23

## HISTORY

### CONSTRUCTIVE THINKING. HISTORY, THEORIES, ANALYSIS

#### OBJECTIVES

This teaching in history is at the crossroads of three themes: construction techniques, architectural culture in its historical dimension and the digital turn of architectural practices.

Articulating the history of construction practices and the history of construction theories in architecture since the 18th century, it aims to provide students with a theoretical background and critical analysis methods to study the transactions between architectural design and construction techniques.

#### CONTENT

This course combines lectures, reading of key texts and exercises in the analysis of architectural achievements, the latter allowing students to apply the theoretical principles acquired and to appropriate a methodology of analysis specific to the construction project developed by an architect.

Applied to projects representative of the digital turn in architecture, these analyses will allow the digital constructive project to be placed in a historical perspective by highlighting continuities with the major themes of modern constructive thought (constructive fiction, detail, tectonics, construction as representation, etc.).

#### ASSESSMENT

Continuous control (30%) :

- Reading sheet
- active participation in course sessions

Final rendering (70%) :

- Analysis file and oral presentation

#### WORK REQUIRED

Reading sheet (1 to 2 pages)

Project analysis file based on the notions of the course (4 pages A3)

Oral presentation of the project analysis (10mn)

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Code: **M.7.2 SH701**

Teachers: L. LOPEZ, M. SAIDI SHAROUZ

**ECTS credits : 2**

Number of weeks : 14

Nber of hours / semester : 21

Nber of hours / week : 1,5

Personal work : 23

## **SOCIOLOGY**

### **METROPOLITIZATION, GLOBALIZATION AND COSMOPOLITANISM**

**OBJECTIVES** Approaching the phenomenon of metropolitization, globalization and cosmopolitism through sociological analysis.

**CONTENT** Study of different urban sociology schools through their texts and authors (Chicago School, French sociology, critique of globalization...)

Study of a contemporary phenomenon: sociology and anthropology of a territory

**ASSESSMENT** Oral Presentation: 40%  
On-site work: 40%  
Attendance: 20%

**WORK REQUIRED** Commentary on texts  
Field inquiry in the Parisian area

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Code: **M.7.2 PH701**

Teachers: A. TÜSCHER

**ECTS credits : 2**

Number of weeks : 14

Nber of hours / semester : 21

Nber of hours / week : 1,5

Personal work : 23

## **PHILOSOPHY**

### **PHILOSOPHICAL ISSUES IN COGNITIVE SCIENCES FOR ART AND ARCHITECTURE: FROM PSYCHOLOGY TO THE NEUROSCIENCES**

#### **OBJECTIVES**

Develop students' capacities to analyze, evaluate and formulate philosophical arguments through examination of the relationships between aesthetics and recent developments in cognitive sciences. We shall most particularly examine the role psychology and the neurosciences can play in elucidating arts and, hence, architectural aesthetic experience.

#### **CONTENT**

In a first stage, we shall provide a general introduction to the objectives and interdisciplinary methods of cognitive sciences through their application to explaining art and aesthetic experience and subsequently, the ways aesthetic experience is distinguished from ordinary perceptive experience in traditional and contemporary philosophical literature will be examined. In a third phase, the question of the naturalization of aesthetics – as a project aiming at studying, explaining and, if possible, resolving traditional philosophical problems in terms of natural psychological processes – will be evaluated through conceptual philosophical analysis. Special attention will be paid to the hypothesis by some psychologists and neuroscientists that artists are intuitive neurophysiologists whose works reveal an implicit understanding of how the human brain works. Finally, the question of emotions will be taken up. In fact, there is a debate among philosophers about whether the existence of aesthetic emotions can or cannot be reduced to other emotions that are not specifically aesthetic. A question rarely asked in the framework of this debate concerns the possible existence of emotions (aesthetic or not) intrinsically linked to architectural experience. We shall thus examine all the particulars involved in these debates.

#### **ASSESSMENT**

End-of-term assignment consisting of a personal written work (in French or English) connected with the ideas explored in the course.

#### **BIBLIOGRAPHY**

Bibliographical references for the course will be provided at the beginning of the semester.

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Code: **M.7.2 PH702**

Teachers: M. ANOTNIOLI

**ECTS credits : 2**

Number of weeks : 14

Nber of hours / semester : 21

Nber of hours / week : 1,5

Personal work : 23

## **PHILOSOPHY**

### **THE POLITICAL STAKES - POLITICAL ECOLOGY AND PHILOSOPHY**

#### **OBJECTIVES**

This course aims at bringing out the main lines of new thinking about nature that develops between the second half of the twentieth century and the twenty-first, based on analysis of works by philosophers (Félix Guattari, Edgar Morin, Bernard Stiegler, Peter Sloterdijk), economists (Serge Latouche), sociologists (Bruno Latour) and landscape designers (Gilles Clément) who have long been encouraging us to build a relation rich in meaning with all the other components (natural, social, technical, urban) of our environment in a clearly stated perspective of political ecology.

#### **CONTENT**

All the ideals of modernity (progress, growth, technology, mastery of man over Nature) have contributed to imposing over several centuries a non-ecological humanism and a techno-economico-scientific development paying little attention to preserving the natural resources of the planet. Recently, environmental urgency and debates around “sustainable development” have placed ecology at the heart of present-day concerns. However, the ecological question cannot be contained in the limited sphere of experts and scientists, nor be expressed in a technocratic vocabulary; it involves a new philosophy of the relationships between humankind, technology and Nature, but also new orientations in all fields of human activity (political, economic and cultural). The course will explore this historical turning point as linked closely to the theory of architecture of the city.

#### **WORK REQUIRED**

Assessment can be through an oral presentation in the course during the semester (subjects to be defined at the beginning of the semester with the teacher) or a written work at the end of the semester. Bibliographical references for the course will be given at the beginning of the semester.

NB: Erasmus students are welcome in the course and can do their written assignment in English or Italian (in the case of major difficulties in writing French)

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Code: **M.7.3 CTA701**

Teachers: J.-P. RIGAUD

**ECTS credits : 3**

Number of weeks : 14

Nber of hours / semester : 42

Nber of hours / week : 2

Personal work : 35

## **CONSTRUCTION / ATMOSPHERES**

### **ARCHITECTURAL LIGHT AND ACOUSTICS**

#### **OBJECTIVES**

This course aims at enriching apprenticeship of the project through an approach to light (natural and artificial) and acoustics, in the understanding and conception of volume, the object in its volume, and volume in its urban or landscape environment. It also aims to familiarise students with using the different elements of the project (materials, colours, surfaces, volumes, full or empty, openings, masks.....) at the interface of light and acoustics.

#### **CONTENT**

- understanding light and acoustics / lectures (on atmosphere parameters, definition of requirements, colours and materials, rules....)
- commented visits of significant sites and real case studies, as well as on-site experience and critical observation, all of which are complementary and indispensable to the theoretical approach

#### **ORGANISATION**

Alternately:

- in-house: lectures, meeting with professionals, presentations and corrections of students' work
- off-site: site visits, meeting with professionals
- students' work based on observations and personal analysis (significant case studies, daylight and nighttime lighting situations, photos, sound...) to be carried out by each student following off-site visits and meetings

#### **ASSESSMENT**

Continuous evaluation: 70% (attendance at visits)

Final exam: 30%

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Code: **M.7.3 CTA702**

Teachers: V. POIRIER

**ECTS credits : 3**

Number of weeks : 14

Nber of hours / semester : 42

Nber of hours / week : 2

Personal work : 35

## **CONSTRUCTION / ATMOSPHERES TECHNOLOGY AND BUILDING**

### **OBJECTIVES**

Taking into consideration the direct links between design and project implementation, the course objectives are:

- To reclaim the techniques spectrum and control of the building site.
- To overcome a noticed lack of competence by an in-depth knowledge of the operational methods encountered during project implementation.

### **CONTENT**

The course is structured around the following themes :

- o Project implementation in the building process :
  - Background and analysis of the various project management functions, from preliminary surveys to project completion.
  - The “permeability” of the various stages, their interactions and limits.
- o The choices of building methods / building site preparation.
  - Tools and operational methods during the infrastructure stage, superstructure and finishing tasks.
  - Building methods / criteria of choice
  - Works planning.
- o Organisation and conduct of the building site (the various contractors, building site supervision).

### **ORGANISATION**

- Lectures (7 sessions)/full class
- Building site visits (3 visits per student) and with half class, in alternance with tutorials (7 4-hour sessions in half class).
- Follow-up and evaluation of the dossier (2 sessions)

### **WORK REQUIRED**

A dossier will be handed in at the end of the semester (visit dossier and details study)  
- Attendance and participation in tutorials (methodological approach to identify building systems and operational methods in two types of land plots).

### **ASSESSMENT**

(in percentage)  
Continuous assessment (participation in building sites visits and tutorials): 50% and final dossier 50%

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Code: **M.7.3 CTA703**

Teachers: V. COMITO

ECTS credits : 3

Number of weeks : 14

Nber of hours / semester : 42

Nber of hours / week : 2

Personal work : 35

## CONSTRUCTION / ATMOSPHERES

### WOOD-INTENSIVE: THE TREE THAT REVEALS THE FOREST

#### OBJECTIVES

Wood Intensive: the tree that reveals the forest

21-25 September 2020 at ENSAM in Cluny (5 nights on site). Max 8 students.

Wood» will no longer be a generality, but a living material whose most appropriate uses derive from its physical characteristics. Rediscover the link between the forest, its exploitation and the use of different species.

#### CONTENT

- To study the timber sector and its actors, without all these stages, from forest management to implementation  
- study the physical and mechanical properties of wood, silviculture and cutting and transformation processes, with the help of the technical platform, the Burgundian Laboratory of Materials and Processes and ENSAM specialists

- resituate the technical aspects in the implementation and constructive techniques

A one-week intensive construction course on the campus of Ensam de Cluny, together with its student-engineers.

5 days including :

Visits (3 half-days) :

- The local forest, with the ONF
- A primary processing company
- Timber projects by local architects

Practice at the technical platform (2 days) :

- Manufacture of an object by group, with a technician, in a wood processing workshop, using the equipment that ensures the basic steps of the manufacture of an object: drying, planing, calibrating, milling, cutting, drilling, peeling ...
- Practical work and study of physical and mechanical properties of wood: mechanical orders of magnitude, elasticity, fiber orientation, humidity, characteristics of species, non-destructive inspection of wood; in the laboratory of wood anatomy, density mapping, microscope observation.

Courses (3 half-days):

- Robert Collet, LaBoMap, ENSAM: introduction to the wood industry, durability and wood preservation
- Rémy Marchal, LaBoMap, ENSAM: durability and wood preservation
- Margotte Lamouroux (LET-LAVUE, ENSAPLV) inventory of wood construction in France, structuring of the sector, regulations.
- Viviana Comito: wood construction techniques, thermal aspects.

Topics for reflection :

- hardwoods in construction, between tradition and new processes.
- use all parts of the tree (small sections, rough wood...)
- wood frame facades

Organization of two evening screenings and debates: Le temps des forêts (by François-Xavier Drouet, 2018); Nul homme n'est une île (by Dominique Marchais, 2017).

5 nights on site, TGV Paris-Maçon and Maçon Cluny shuttle on Sunday evening, return on Friday evening.

The train is taken care of by the ENSAPLV, but not the accommodation (type youth hostel, common reservation made by the school but foresee in the 25€ per night.

../..



Code: **M.7.3 CTA703**

Teachers: V. COMITO

**ASSESSMENT** Participation, consistency and cooperation; final manufacturing project.

**WORK  
REQUIRED**

- Manufacture of a small object (plans provided by ENSAM)
- Project of a second object to be realized after the first manufacturing experience> selection of the best projects to be manufactured in the next edition

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Code: **M.7.3 CTA704**

Teachers: M. LOPEZ-DIAZ

**ECTS credits : 3**

Number of weeks : 14

Nber of hours / semester : 42

Nber of hours / week : 2

Personal work : 35

## **CONSTRUCTION / ATMOSPHERES**

### **REHABILITATION AND SUSTAINABLE DEVELOPMENT**

#### **OBJECTIVES**

##### 1. INTRODUCTION

France: 32 million dwellings to rehabilitate according to present needs for comfort and environmental, social and economic standards,

Only 370,000 undergoing work for all of 2011,

?: rehabilitation and regular maintenance of buildings instead of demolition (when feasible) enable considerable reduction in consumption of raw materials and especially energy,

?: a proper diagnosis is the key to a proper rehabilitation

?: a diagnosis cannot be limited to dysfunctions and pathologies; it must first emphasise the qualities to be safeguarded in a building as well as their possible evolution within the framework of sustainability,

?: rehabilitation represents an important market for future architects that is considerably more complex than new building

##### 2. OBJECTIVES

?: integrating the notion of sustainable development into the rehabilitation process

?: capacity to make a broad diagnosis of dysfunctions and opportunities..., a diagnosis that takes into account, among other factors, interaction with the site, the social form of occupation, technical issues according to the building administration (condominium, owner-occupied? rental?), economic possibilities, cultural or heritage value, current regulations and their possible evolution. This necessitates thinking in the short, middle and long term.

?: ability to choose intervention techniques accord to each building typology and management types

?: adopt a diagnostic methodology for transversal action based on multi-criteria, hierarchised choices

?: future architects must acquire an analytical methodology and, at the same time, clearly comprehend the limits of their interventions, being aware of which type of expertise is needed on a case-by-case basis.

#### **CONTENT**

##### 3. BRIEF CONTENT SUMMARY OF LECTURES

?: introduction to the problematics of rehabilitation: what is at stake in rehabilitation – social, environmental, economic factors

?: various stages of rehabilitation process. Role of diagnosis in each one.

?: objective of project ownership : limits of diagnosis

?: typological identification

?: diagnosis: pathologies due to poor original design? to inadequate rehabilitation? to defects in materials? to poor implementation?

?: diagnosis of opportunities: for example, recovery of rain water? passive solar contribution...

?: security diagnosis: for example, fire security, electricity,

?: health diagnosis: for example, radon and ventilation, acoustics, humidity, natural light, accessibility

?: technical diagnosis: example of structural diagnosis, health of the building : dry rot, insects, humidity?

?: consumption diagnosis ?

?: architectural diagnosis: space utilisation? analysis of social and functional occupation

?: final relationship with hierarchised intervention plans and contributions enabling reformulation of programme. Integrating regulations.

#### **ORGANISATION**

50% lectures and 50% group tutorials. Tutorials address a 'real' building to be rehabilitated. Students will make a step-by-step analysis of the building according to the various stages of the diagnosis. Site visits.

Tutorials : making various diagnoses.

#### **ASSESSMENT**

Intermediate assignments, active attendance of course, final assignment: dossier centered on diagnoses of building studied + oral presentation about understanding rehabilitation and diagnostic steps.

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Code: **M.7.3 CTA705**

Teachers: D. HAMANI

**ECTS credits : 3**

Number of weeks : 14

Nber of hours / semester : 42

Nber of hours / week : 2

Personal work : 35

## **CONSTRUCTION / ATMOSPHERES**

### **SIMULATION AND THERMAL ATMOSPHERE EVALUATION**

#### **OBJECTIVES**

This course aims at initiating students to digital tools for assessment and simulation appropriate to the needs of architects working in the field of thermal comfort. Our objective is to reinforce the notion of reasoned conception and to enable students to understand that use of simulation tools for thermal comfort must be articulated with the architectural project from the beginning.

The objective of the course also involves acquiring and experimenting with computer simulation tools for thermal comfort in the architecture design process. This will enable students to test the efficiency of architectural options chosen in relation to projects in the framework of their environment.

This does not mean making the students (future architects) into pseudo-engineers who want to calculate everything, because we do not believe this is their role, but to allow them to see the place of an architect confronted with early assessment of the impact of conceptual, morphological and technical choices.

#### **CONTENT**

The course is articulated around the following topics:

1. Energy-saving strategies in buildings
  - Reminder of basic notions of themics
  - Principle of bioclimatic conception: strategy of warm in the winter, cool in the summer
  - Thermal performance of materials (inertia, insulation, etc.)
  - Presentation of architectural projects integrating low-energy-consumption and passive buildings
2. Dynamic Thermal Modelling (DTM)
  - DTM in design stage or for rehabilitation
  - Optimisation of energy needs according to envelope
  - Functional principle of DTM tools (CodyBa, Pleiades Comfie, TRNSYS, etc.).
3. Case study in DTM with Pleiades Comfie
  - Definition of building model
  - Deciding on coherent constructional strategies in relation with thermal comfort and architectural choices (morphology, materials, glass surfaces, etc.)
  - Modelling thermal comfort with computer experimentation on digital maquettes
  - Analysis and interpretation of results
  - Optimisation of following case study: strategy of warm in winter and cool in summer
4. Personal mini-project :
  - Personal research on a case study of early thermal assessment involving possible modifications to project depending on results.

#### **ORGANISATION**

This course includes 1.5-hour lectures and group tutorials of 2 hours per week in the computer room.

#### **ASSESSMENT**

Exercises and personal mini-project using CAD and comfort modelling. Continuous assessment 50% and final hand-in of personal work 50%

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**Code:** M.7.3 CTA706  
**Teachers:** B. BAZIN, G. VERYN FORRER

**ECTS credits :** 3  
 Number of weeks : 14  
 Nber of hours / semester : 42  
 Nber of hours / week : 2  
 Personal work : 35

**CONSTRUCTION / ATMOSPHERES**

**CURVED FORMS STRUCTURES, HULL AND TAUT CANVASSES**

**OBJECTIVES** This unit takes up again the bases of beam theory in the licence curriculum and enriching them with concrete examples, particularly from naval architecture. Students will learn to utilise the graphic, mathematics and computer tools involved.

**CONTENT**

- 0/ review of maths and geometry
- 1/ fundamental principle of statics, equilibrium of forces and moments
- 2/ materials resistance, generalities
- 3/ deformation, notion of inertia and stiffness
- 4/ tension, shear, bending and torsion
- 5/ plate subjected to uniform pressure
- 6/ buckling, guyed mast
- 7/ introduction to composite materials

Applications thanks to analytical and graphic methods  
 Using RDM6, Rhino and Grasshopper software.

**ORGANISATION** 3.5 hours per week, 1.5 hours of course work and 2 hours of tutorial with group and individual attention, 14 sessions = 49 hours

**ASSESSMENT** Exercises – computer files – supervised work

Code: **M.7.3 CTA707**

Teachers: Y. MAHIEU

**ECTS credits : 3**

Number of weeks : 14

Nber of hours / semester : 42

Nber of hours / week : 2

Personal work : 35

## **CONSTRUCTION / ATMOSPHERES**

### **LIGHT STRUCTURES / CONCEPTION - MANUFACTURING**

#### **OBJECTIVES**

The essential aim of this teaching is to teach the relationship between structure and form, from a minimalist point of view from the point of view of subject matter.

The second objective is linked to the experiments proposed to ultimately grasp the complexity of the relationship between structure and form.

As the focus is on the internal and external balances of the body (via biomechanics, acroyoga ... ) and on the structural functioning of artistic installations, it is expected that the students will become aware that the study of structures should be considered not only as necessary for the design of buildings, but also as an access to the understanding of the world around us and of our own body ...

Examples :

<https://www.youtube.com/watch?v=gwxTgiV7oJw>

Examples related to the practice of acroyoga from the 6th minute.

[https://www.youtube.com/watch?v=J2SfG\\_UvqnI&feature=youtu.be](https://www.youtube.com/watch?v=J2SfG_UvqnI&feature=youtu.be)

This teaching is in line with the Structural Morphology teaching given in L1 and the OT18 proposed in L2.

Example <https://www.youtube.com/watch?v=4T7FMvRLWkU>

#### **CONTENT**

##### **Part 1: Bodies & Structures**

Approximately 8 to 10 sessions will be dedicated to experiments involving the body.

-Yoga, acroyoga, mixed structures (body + canvas, bamboos, ropes ... )

An acroyoga teacher (Yohann Guichard) will supervise these sessions with Yves Mahieu.

In connection with these experiments, classes will be given on the following themes:

- The degrees of freedom
- Canvas and hulls
- Tensegrity in Art and Architecture
- biomechanics

The first 2 sessions will be guided, the following sessions will be supervised, but offered at the initiative of the students who will present an original realization during the last session.

##### **Part 2: Art & Structures**

Other sessions will be dedicated to experiments leading to an installation.

For 1 or 2 of these sessions, the intervention of 1 or more artists is planned as follows:

- 1 hour of presentation of their work
- 2hoo of a mini workshop at the initiative of the artist

The following sessions supervised by Yves Mahieu are offered on the initiative of the students who will ultimately present an original installation.

Code: **M.7.3 CTA707**

Teachers: Y. MAHIEU

The last session will allow the students to report on their work with the presentation of a film and boards analyzing the structural modes of operation of their creations.

For example:

<https://www.youtube.com/watch?v=gwxTgiV7oJw>

**ASSESSMENT**

Participation: 50%

Final exam: presentation of a file and a film 50%

**WORD  
REQUIRED**

Design & realization of a static or dynamic structure using bodies.

Design & realization of a static or dynamic installation using an optimized structure.

Structural analysis of the realizations (files and films)

**LANGUAGE**

Course language: French

Communication languages: French

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Code: **M.7.3 CTA708**

Teachers: M. LEYRAL

**ECTS credits : 3**

Number of weeks : 14

Nber of hours / semester : 42

Nber of hours / week : 2

Personal work : 35

## **CONSTRUCTION / ATMOSPHERES**

### **EXPLORE TO SCALE 1**

#### **OBJECTIVES**

Around a theme of experimental architecture or structures (gridshells, flying structures, catenary structures, tensegrity, Catalan vaults, etc.), the thematic courtyard proposes an in-depth research, both architectural and technical, on this new architecture and the realisation of a project for a pavilion on a scale of 1. A certain transversality will be set up with Sylvain Ebode's CT 'Franchir en compression' (Crossing in compression).

#### **CONTENT**

The project will be developed in the first half of the year:

- A pavilion
- On an experimental theme
- Approximately 30/40 m<sup>2</sup> (about 30/40 sq ft)
- Intended to be built in a park in Paris
- Objective of participation/presentation at conferences of the work done (DMS, IASS, etc.)
- The project will be built within the framework of the TC Experimental Scale 1 in the second half of the year.

A publication support (book and/or MOOC) will be realized by the students, with the help of the supervisors, on the chosen theme and published. It will present the whole of the research and the project in a modern form (video production, animation, Wiki pages, etc.).

The work will be published on the website Construire l'Architecture ([www.construire-l-architecture.com](http://www.construire-l-architecture.com)).

#### **ASSESSMENT**

The participation in the publication support (book and/or MOOC) will count for 60% of the note. Participation in the project will count for 40% of the score.

#### **WORK REQUIRED**

The semester is made up of 14 sessions of 3 hours each, itself broken down into 1.5 hours of classes and 1.5 hours of supervised work.

The course will use the techniques of parametric architecture/structure. A good knowledge of Rhino and Grasshopper is an asset but an upgrade will be made at the beginning of the TC on this topic.

Language of the course: French

Languages of communication: English, Spanish, Italian

Code: **M.7.3 CTA709**

Teachers: S. EBODE

**ECTS credits : 3**

Number of weeks : 14

Nber of hours / semester : 42

Nber of hours / week : 2

Personal work : 35

**CONSTRUCTION / ATMOSPHERES**

**BUILDING DAY BY DAY : STRUCTURAL ARCHETYPES DETAILS**

**OBJECTIVES**

The objective of the course is to acquire a directly usable professional ability by developing creativity in terms of details and a good understanding of archetypes and their own logics.

The development of this capacity for creative synthesis is based on a few fundamentals that the course proposes to explore:

- Know how to identify an archetype among the diversity of aspects ;
- Know how to decline the common forms of a structural, constructive and architectural archetype ;
- Know the details and typical implementations of these archetypes ;
- Understand the reasons for the typical details and implementations ;
- Develop an informed and therefore operational personal vision of constructive detail.

**CONTENT**

Indirect professionalization by making constructive details in drawing and modeling, on a large scale between 1/5 and 1/1:

- Reproduction by drawing or modeling in 1:1 scale of an existing representative standard detail
- Development of a detail from a personal project by the same means

The tool for acquiring knowledge and personal expression is drawing and modeling on a large scale, most often scale size, condition for a better understanding and therefore for greater freedom.

**ASSESSMENT**

Students work in pairs on two types of exercise per typological group:

Evaluation by continuous monitoring

**LANGUAGE**

Course language: French

Language of communication: English

**WORK  
REQUIRED**

**LANGUAGE**



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Code: **M.7.3 CTA710**

Teachers: L. BERGER

**ECTS credits : 3**

Number of weeks : 14

Nber of hours / semester : 42

Nber of hours / week : 2

Personal work : 35

## **CONSTRUCTION / ATMOSPHERES**

### **REHABILITATION/INTERVENTION ON OLDER BUILDINGS**

#### **OBJECTIVES**

This course will make students aware of the pathologies of older buildings and rehab work. It will enable them to build up a knowledge base about current construction procedures concerning buildings erected between 1850 and 1930 and the construction dispositives adapted to implementing their rehabilitation.

#### **CONTENT**

The course is based on the following themes:

- Analysis and identification of constructions (before 1850, between 1850 and 1900, between 1900 and 1930, after 1930), highlighting various typologies (constructions in wood and stone, half-timbered, cast-iron construction, concrete structures)
- Constraints on rehabilitation
- Architectural diagnostics
- Construction principles by period (adaptation to ground, principal structures, envelope, partition)
- Technical diagnostics
- Interventions and rehabilitation work according to type: adaptation to ground (underpinning operations, infrastructure work, dealing with humidity.

. Principal Structures: load-bearing walls and floors (disorders, buttressing work for vertical, horizontal and carpentry structures) principales

. Envelope : (disorders and treatments for walling and roofing)

. Amenities

. Comfort and thermal and acoustic performance

Two detailed case studies and visits to construction sites will illustrate the course content: an 18th-century building in a listed sector of the Yvelines, and a late 19th-century “faubourg” building in Paris

#### **ORGANISATION**

- Attendance at lectures and tutorials

- Examination and assessment of case study files

Thematised construction analysis according to building typologies (work in two-student groups)

Enlarged and detailed proposals for interventions (in relation to the programme). The proposals will be accompanied and justified by detailed graphic production on a large scale.

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Code: **M.7.3 CTA711**

Teachers: S. BARA

**ECTS credits : 3**

Number of weeks : 14

Nber of hours / semester : 42

Nber of hours / week : 2

Personal work : 35

## **CONSTRUCTION / ATMOSPHERES**

### **FAÇADES, BASIC NOTIONS**

#### **OBJECTIVES**

Ever since settling down, human beings have attempted to protect themselves from their environment, moving from the search for any sheltering hole, cave or vegetal matter that can be adapted to this for a short or longer stay, towards real construction to shelter humans, their animals and their crops. The rock face that sheltered becomes a simple wall which marks off inside from outside space.

So, here we are, in a space between two walls that must respond to the requirements and needs of the occupants according to their activities. In order to carry this out, we must begin by defining the constraints and conditions underlying the choice of an appropriate constructive system with the desired protective envelope. The façade is an element indissociable from the project. However, architects must understand the technical conditions for building a façade and this is the object of the course.

#### **CONTENT**

Fundamental technical knowledge for building façades:  
Planning requirements – notions of performance – typology – representation

#### **ASSESSMENT**

Participation / Attendance  
Assessment of class assignments  
Project assignment

#### **WORK REQUIRED**

Personal research  
In the framework of the tutorials, there will be an analytical dossier or design of façade(s). Visits (if possible):  
photographs, drawings, notes

#### **LANGUAGE**

Course given in French  
Language of communication : French

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**Code:** M.7.3 CTA712  
**Teachers:** C. SOURTCHEVA KIROV

**ECTS credits :** 3  
 Number of weeks : 14  
 Nber of hours / semester : 42  
 Nber of hours / week : 2  
 Personal work : 35

**CONSTRUCTION / ATMOSPHERES**  
**CONSTRUCTION ECONOMICS**

**OBJECTIVES** To build «a foundation» and optimize students’ knowledge of how to calculate the cost of a real estate transaction, while integrating environmental performance. Familiarization with a «global» cost will enable future architects to analyze and identify the types of costs/over-costs of works to improve their recommendations and their arguments, in the face of «Project Management» in the real estate sectors linked to operations in the field: public or private.

**CONTENT**

- Apprehend the cost of construction and renovation work programmes, define the concept of a works programme trajectory and calibrate the necessary financial amounts, make known evaluation and contractualisation tools (design-build contracts, etc.).
- Highlight the way to translate «the cost» in order to help students use the appropriate evaluation methods, depending on the type of real estate transaction.
- Modelling of work costs. Observations in renovation and new construction. Optimizations, zoom on operations: in housing: individual and collective.

**ASSESSMENT** Ongoing on their projects through practical exercises

**WORK REQUIRED** Notions, vocabulaire et enjeux du coût global économique d’une opération immobilière.

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Code: **M.7.3 TR701**

Teachers: P. HANNEQUIN

**ECTS credits : 3**

Number of weeks : 14

Nber of hours / semester : 42

Nber of hours / week : 2

Personal work : 35

## DIGITAL TRANSITION - BIM - REPRESENTATION

### INTRODUCTION TO DESIGN (NAVAL ARCHITECTURE, OBJECT...)

**OBJECTIVES** On the basis of a problem chosen by each student (within a group project) or a theme proposed by the teacher (sailboat), the objective through the world of the object in relation to architecture is to be able to critique one's own approach (crossing fields, relationship of scales) preceding finalisation and subsequently to use the appropriate tools for the project and mastery of curved forms (the form plan used in naval architecture, for example).

**CONTENT** The course will underwrite a personal approach and enrich capacities of expression (mastery of literary, graphic and computer tools)  
 Course on design history (periods, movements) and its relationship to architecture.  
 Initiation to and enriching skills with a 3D modeller (Rhinoceros) as an appropriate tool in mastering conception work: work on typical objects (familiarising students with curved forms) before starting the project.

**ORGANISATION** writing  
 sketches  
 3D formatting

**ASSESSMENT** Continuous assessment 50%  
 Research on a designer or movement (A4 dossier)  
 Final exam as project hand-in

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Code: **M.7.3 TR702**  
 Teachers: J. BERGNA , A. RAYNAUD

**ECTS credits :** 3  
 Number of weeks : 14  
 Nber of hours / semester : 42  
 Nber of hours / week : 2  
 Personal work : 35

**DIGITAL TRANSITION - BIM - REPRESENTATION**  
**MAQUETTE AS CONCEPTION TOOL**

- OBJECTIVES** ‘The Thinking Hand’ by Juhani Pallasmaa.  
 For a sensitive and technical approach to volume maquettes.  
 This course aims at emphasising our determination to rehabilitate work by hand in representation of the Architecture Project. It enables students to tame matter so hat it expresses a spatial concept – there is our principle.
- CONTENT** On the basis of constructing maquettes, we take up the questions of scale, techniques and various materials. This work will demonstrate all they have to offer as educational tools by making the student construct a systhesis between plan, cross-section and elevation, developing a sense of structure, encouraging students to decide on a strategy in the choice of operational mode, mastering all of a spective tool kit, developing sensitivity to the evocative power of matter to simulate a material, in short, encourage them to become aware, through the global dramatisation of the project, of the coherence of the underlying architectural work.
- ORGANISATION** Students will work in teams or individually according to the 3 or 4 subject chosen.
- ASSESSMENT** Continuous assessment

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Code: **M.7.3 TR703**

Teachers: H. JEZEQUEL

**ECTS credits : 3**

Number of weeks : 14

Nber of hours / semester : 42

Nber of hours / week : 2

Personal work : 35

## **DIGITAL TRANSITION - BIM - REPRESENTATION**

### **OPTIONAL PHOTO**

#### **OBJECTIVES**

This course proposes to enable students to acquire the essential knowledge to practice photography. However, technology is not an end in itself and must allow students to go on from there, encouraging their capacity to choose how to build their own look and create images. The teaching method focuses on practical exercises which therefore allow students to acquire autonomy and sufficient technical ease in achieving these photographic projects, as well as develop their own critical perspective about the flow of images that we are confronted with.

#### **CONTENT**

The course is based on three axes:

- 1 - Acquisition of photographic technique on the basis of analogic photography (black and white laboratory) and image processing in digital photography.
- 2 - Discover the history of photography from the nineteenth century to contemporary practices through short presentations. The photograph is located, by nature, at the crossroads allowing the student to open up to interdisciplinary perspectives both in the media as ideas (history, politics, aesthetics) and sciences (sociology, geography, etc.).
- 3 - Workshop tutorials. During the course, the student is required to perform exercises to experiment or make a short presentation (read image or photographers' monographs or artists using photography).

#### **ORGANISATION**

Classes are held weekly in the photography workshop or external meeting places

#### **WORK REQUIRED**

- 1 - Continuous exercises during the course.
- 2 - The students, having gradually acquired the technical and historical bases of photography, will develop a personal project using the technique that best suits them, and present this work in the form of original prints (class presentation), book-object or projection.

It is recommended that students bring their own photographic equipment (analog and / or digital) from the first course on, if possible.

#### **ASSESSMENT**

Continuous assessment: 50%

Final assessment: 50%

Criteria of assessment: project relevance, quality of the reports, attendance and participation of the student during the courses.

Code: **M.7.3 TR704**

Teachers: F. COUSSON

**ECTS credits : 3**

Number of weeks : 14

Nber of hours / semester : 42

Nber of hours / week : 2

Personal work : 35

## **DIGITAL TRANSITION - BIM - REPRESENTATION**

### **DIGITAL URBAN MODEL AS AN ARCHITECTURE TOOL**

#### **OBJECTIVES**

Themes:

Presentation of a construction project inevitably involves using the computer to convince decision-makers rapidly and easily.

Thus, virtual reality today enables us to model the visit to a building (even before it is constructed), even to interact with some of its components.

However, this approach also implies all the problems in the field: making something that does not exist seem real in an environment that is.

In spite of the studies published over recent years on the virtual world, it seems there are still semantic questions about the word and, as regards the concept, epistemological difficulties.

These issues are linked to the complex relations the virtual thing, on the one hand, and the virtual on the other, have with the actual and the non-actual. Virtual used to be an adjective.

In a few years, the epithet has swollen to the point of becoming a noun. At the end of the 1980s, people began speaking about virtual images, then virtual objects, then virtual agents.

All these, due to their number and increasing complexity, have come to people virtual environments, even virtual worlds.

Subsequently, the equivocal expression of virtual reality became common and today people speak of virtual as if they meant real.

Virtual used to qualify a form. Today it means a substance. Virtual was the modality of the thing in its potentiality. It has become the thing in action.

In a word, virtual has been actualised, virtual has become actual.

Architecture presented or representation of an architecture.

Whatever may be the scale of architecture one is working on, the problem remains the same: in moving from representation of the virtual towards representation of the real, the imaginary becomes a concrete construction, a maquette, a prototype, an image or the contrary, representation of what exists moving towards a represented world, and there, what is constructed becomes potential, conditional, represented.

In order to enhance the realism of an immersive experience, several factors have to be taken into account throughout the process of constructing a virtual environment.

Aside from the quality of the modelling, 'wrapping' and lighting phases for a scene, it is also necessary to identify from the beginning the dynamic and reactive aspects of the virtual environment.

This problematic will be set out and dealt with through an urban study of a site and an architectural project in it.

#### **CONTENT**

Reconstruction of data. First, reconstructing the city (cities, neighbourhoods, buildings?), though an urban analysis approach.

'Reading' a city is done through plans, cross-sections, facades on a CADD (computer-aided design and drafting) tool with digital images (plan or photos, aerial photos?) and vectorial data (DWG and DXF format cadastre, GIS data).

Historical data are dealt with in the same way. The whole put together makes up a databank on the city available to every student.

Each student then makes a digital synthesis compatible for everyone (PDF format).

Next comes 3D reconstruction of the city: everything begins with studying the principles of data entry aiming at a 'reading' of the city on-screen in 3 dimensions and in real time.

Acquiring skills with suitable software, computer interpretation of the real, and the foundations of virtual reality then stand side-by-side with shaping the city.

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Code: **M.7.3 TR705**

Teachers: D. BEAUTEEMS

**ECTS credits : 3**

Number of weeks : 14

Nber of hours / semester : 42

Nber of hours / week : 2

Personal work : 35

## **DIGITAL TRANSITION - BIM - REPRESENTATION ARCHITECTURAL SURVEY PRACTICES**

### **OBJECTIVES**

In portraying what exists, we are often confronted with problems linked to surveying practices and representation in architecture. Through training and exercise in different survey techniques, the objective is to analyse, portray and represent an existing building and valorise its heritage or particular interest. In a concrete way, this means confronting manual techniques (drawing, sketching...) and digital techniques utilised in architectural surveying (theodolite, photomodélisation, 3-D laser scanning), but also thinking about how they are used to portray buildings and monuments. We endeavour to teach students the different survey practices for heritage portrayal that mobilises the ensemble of knowledge from different disciplines. In practice, this consists in surveying buildings or historical monuments using manual and digital techniques, then producing various types of representations and portrayals with different levels of detail. Taking into account the direct links between survey and the portrayal of an architectural project, this course attempts to: experience and master architectural survey practices; recover information to manually and digitally portray the building studied; produce various types of representations of a building: plans, facades, cross-sections, 3-D models and details.

### **CONTENT**

In this course, we shall take up the various techniques of architectural surveying: manual; theodolite topography; photomodélisation; 3-D scanning, as well as the modelisation methods appropriate to each of these techniques. Mastering surveying with these approaches will enable students to evaluate their advantages and limits, as well as to choose the tool best adapted to needs. Based on case studies made by professionals, we shall use these procedures to survey buildings (old or new) in their true dimensions, then portray them through plans, cross-sections, side-views and 3-D models. This work will form the basis of a study, representation of damaged or destroyed sections or perhaps a constructive diagnosis. This course takes place in two phases: 1/ survey campaign on-site of a building ; 2/ analysis and data collection.

### **ORGANISATION**

Lectures of 1.5 hours and group tutorials of 2 hours per week in the computer room. Appearances by professionals in the field to present a pragmatic approach to the subjects studied. Students will be divided up into several groups.

Course breakdown (in hours): lectures, 28 supervised tutorials, 21 practical work, personal work 21 .

### **ASSESSMENT**

Exercises and personal mini-project using modelisation and calculation software; digital 3-D portraits; monograph and technical profile of building studied; end-of-semester dossier presenting: working approach, portrayal and verification hypotheses, analysis of advantages and disadvantages of each method. Continuous assessment 50% and personal dossier 50%.



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Code: **M.7.3 TR706**

Teachers: D. GUICHARD

**ECTS credits : 3**

Number of weeks : 14

Nber of hours / semester : 42

Nber of hours / week : 2

Personal work : 35

**DIGITAL TRANSITION - BIM - REPRESENTATION**  
**DRAWING AND MODELLING CURVED-FORM STRUCTURES,**  
**HULL AND TAUT CANVASSES**

**OBJECTIVES**

Architectural design today often calls upon modelisation software that is more and more efficient, in growing connection with construction and use. The objective of this module is a general presentation of these tools, essentially within the framework of design. The classes will provide a panorama of the field, sometimes referring to other industries and especially emphasising naval architecture. In the supervised tutorials, real applications will be dealt with by the students using the software tools available at the School (Rhino, Grasshopper, RDM6) based on examples associated with naval architecture.

**CONTENT**

- 1/ General presentation – CAD – geometric modelisation – summary presentation of Rhino 3-D and hands-on practice;
- 2/ simple manipulations of curved surfaces and volumes with Rhino3;
- 3/ curve and surface modelisation; NURBS, alternatives, structurations;
- 4/ modelisation of a hull; general case and specific points;
- 5/ case of hulls in developable panels; rapid and precise approaches;
- 6/ modelisation of taut structures;
- 7/ Grasshopper – how to develop skills in service of design;

Nature of work required: sketches, calculation notes, exercises, computer files.

**ORGANISATION**

3.5 hours weekly, 1.5 hours of class and 2 hours of supervised work with group and individual attention, for 14 sessions = 49 hours  
 1.5 hours lectures and 2 hours practical work over 14 weeks

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Code: **M.7.3 TR707**

Teachers: F. GUÉNA

**ECTS credits : 3**

Number of weeks : 14

Nber of hours / semester : 42

Nber of hours / week : 2

Personal work : 35

## **DIGITAL TRANSITION - BIM - REPRESENTATION**

### **INITIATION TO PARAMETRIC MODELIZATION**

#### **OBJECTIVES**

The educational aim is to provide students with the knowledge to create parametric models for computer assistance in eco-design.

#### **CONTENT**

Both ecological and energy transitions necessitated by environmental requirements are transforming architectural design practices and are leading architects to use digital assistance tools for design based on parametric modelization. A parametric model defines a morphological space that can be explored on the basis of parameters. A combination of parameter values produces an instance of form that it is possible to evaluate from a technical point of view. The combinations of parameter values can also be determined by optimization on the basis of a function of target evaluation. These mechanisms can efficiently assist architects in their eco-design activities. This course aims at training students in parametric modelization on the basis of the Grasshopper visual programming tool (plug-in of parametric modelization for the 3-D Rhinoceros geometric modelization software)

#### **ASSESSMENT**

Final exam and continuous assessment.

#### **ASSESSMENT**

Each class session will provide a theoretical basis and practical exercises to carry out in class and in personal between-course work.

A website, updated with each session will present the concepts explored and the exercises to be carried out.

Code: **M.7.3 TR708**

Teachers: B. SEGERS

**ECTS credits : 3**

Number of weeks : 14

Nber of hours / semester : 42

Nber of hours / week : 2

Personal work : 35

## **DIGITAL TRANSITION - BIM - REPRESENTATION**

### **DRAWING IN THE CITY**

#### **OBJECTIVES**

The objective of this option is to reactivate drawing as a representational technique, with drawing practiced 'on the theme' in the city.

This technique can provide a fruitful approach to topical subjects in the city. The objective is to construct a critical, in-depth and material outlook with simple means by way of drawing.

We shall experiment with the limits of this language.

#### **CONTENT**

The subjects chosen each year are sufficiently broad so that the whole semester is not enough to exhaust them: courts and justice, shopping centres, nature in the city...

On the basis of these places of daily practice, each student can learn to construct an argument, a choice, a way of seeing. This way of seeing can be explicated on the basis of the nourishing and open experience of drawing.

This technique must be understood within the broad spectrum of liberties it offers for constructing viewpoints (close up or in context, aerial view, plans, cross-sections...), the tools utilized (dry and water techniques, collages...), as well as the subjects chosen (spaces, users, colours, décor...). We shall also keep in mind the liberty allowed by drawing in relation to other techniques that concern the ownership of images especially in places where photography and video-recording are forbidden.

Students will have to regularly publish their work on the dedicated online collaborative platform, a wiki. This tool will enable them to:

Create an open working space

Be introduced to code

Handle and publish files

Capitalize and bring together students' work from one year to the next.

Address: [www.ouarpo.net](http://www.ouarpo.net)

User: ouarpo

Password: ouarpo-edit

#### **ORGANISATION**

Sessions will be devoted to on-site drawing. Accompaniment will orient the progression of the work in relation to the subject and time at the beginning of each session will enable us to analyse progress and clarify objectives.

Three intermediate assessments will make it possible to compare and collect the ensemble of work done to put it into perspective with the relevant references.

Students will need time outside the course to process the drawings (scan, put online, edit).

#### **ASSESSMENT**

The wealth of levels experimented with will indicate the final result as well as the student's capacity to present drawings as documents reflection thinking about the city.

#### **PREREQUISITE**

Pre-requisites: students must already be familiar with drawing

#### **LANGUAGE**

Teaching language: French

Communication language: French and English

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Code: **M.7.3 TR709**

Teachers: D. BEAUTEMS

**ECTS credits : 3**

Number of weeks : 14

Nber of hours / semester : 42

Nber of hours / week : 2

Personal work : 35

## **DIGITAL TRANSITION - BIM - REPRESENTATION**

### **MASTERING ARCHICAD**

- OBJECTIVES** The objective of this course is to enable students to work independently with 3-D software for architecture. By the end of the course, they will be able to conceive an architectural project (more or less complex) and communicate with plans, cross-sections, drawn views and realistic finishing.
- CONTENT** With digital maquettes becoming essential in an architectural project, familiarity with one or several software programmes for modelling the architectural project is a necessity. Learning exercises carried out during the course will enable students to understand the philosophy of the Archicad software in a few sessions.  
40 students maximum
- ORGANISATION** Half the time will be devoted to learning the 'essential' commands, the other half to carrying out a personal project.
- ASSESSMENT** Continuous assessment and final assignment.
- LANGUAGE** Teaching language: French  
Communication language: French and English

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Code: **M.7.3 TR710**

Teachers: S. NAVA

**ECTS credits : 3**

Number of weeks : 14

Nber of hours / semester : 42

Nber of hours / week : 2

Personal work : 35

## **DIGITAL TRANSITION - BIM - REPRESENTATION**

### **PAGES TO THINK WITH AND NOT GET LOST**

#### **OBJECTIVES**

«Thinking» the printed page and, more exactly, the book as a place to build thinking in architecture.

#### **CONTENT**

In his introduction to *L'architecture à l'âge de l'imprimerie* (Architecture in the age of printing), Mario Carpo emphasises how much the periodical modifications in architectural forms show up with each development in construction techniques or interference from new procedures, the only notable exception being the Renaissance, when "architectural forms changed suddenly and radically in most construction sites in Europe without any change in materials and tools". This shift can be explained by the discovery of a reproduction technique of revolutionary power: printing, which was to enable the development and spread of books, notably in architecture.

"It is a craft to make a book, as it is to make a clock", La Bruyère noted, and this is why we propose to students to attempt, as amateurs, this delicate, even potentially revolutionary, bit of clock-making, if we are to follow Carpo, that is represented by creating a printed work. "Building" a book requires confronting a whole bundle of decisions about both the contents and the materiality of the object to be made. One must think about the text/s, the image/s, their hierarchy, their ordering, then think about how this matter will exist once printed on the page. There will thus be questions of typography, layout, paper, format, binding, printing techniques, and then decisions about the "social" life of the book (print run, distribution, price...). The ensemble of these elements makes up the book and, if each of them is more or less important depending on the nature of the work, they all have to be decided upon and thus, one might hope, engage thinking. Consequently, somewhat like an edifice, all these elements combined – from structure to the slightest detail – partake in the total understanding of this object that we consider as a place to build.

All right, so it's a book, but what are we going to put into it?

The proposal is made to each student to work out personal, theoretical and critical thinking centered on several architectural objects of their own choice. That is, architectural works to be placed in relation, in a critical way, with texts, outside references or any element useful in elaborating architectural thinking. This work can outline the presages of more advanced thinking on the part of students within the framework of a memoire, as well as include elements of personal reflexion brought into play elsewhere (for example, in the practice of the project...). The relation of thinking that students wish to establish between texts and images involves thinking about spatial organization within the page but not in the relations of subjugation of the "image-caption" or the "text-illustration" type. The material utilized will be thought of as equal parts of a whole representing thinking, rather like the way Charles Darwin, in his notebooks, thought about the idea of creation and the ramification of species most particularly through his drawings of corals. "This profusion is accentuated in the third drawing [...] where henceforward nothing recalls a tree. In order to record this turnaround both in the drawing and the text, in this fortunate moment in the history of sciences, Darwin wrote the formula "I think" above the sketch, thus defining the medium of drawing as a membrane of thought. The image is not the derivative or the illustration, but the active support of the intellectual process "I think": thus writes the thinker and thus speaks the sketch", the art historian Horst Bredekamp notes.

In the idea where the object to be created is a book, the space it provides will be mobilised in extenso to contribute to thinking. The typographical choices and the way space is occupied on the page, as well as the materiality of the work, will be understood as partaking of the thinking proposed and will be an integral part of the process of elaborating this thinking. So, the exercise will be both theoretical and practical: thinking with texts and images composed on the page. The lexicon of printing often flirts with that of music. The metteur en page (typesetter) is the compositeur (composer) responsible for this operation for Littré

../..

Code: **M.7.3 TR710**

Teachers: S. NAVA

[dictionary]. Stéphane Mallarmé, speaking of his poem *Un coup de dés jamais n'abolira le hasard* (a throw of the dice will never do away with chance) uses the word *partition* (sheet music) about the way he sets out the “blank spaces” on the page. Hence, the figure of the man-orchestra reappears, attached here to creating – on paper – ideas in architecture, and persuaded by Madame de Sévigné’s adage: “As long as we have books, we shall not lose our way”!

**ORGANISATION** Attendance and active participation in the courses. Final assignment.  
Creating a book (format and number of pages to be determined depending on the student’s project).

**ASSESSMENT** Continuous assessment and final assignment.

**LANGUAGE** Teaching language: French  
Communication language: French, English, Italian

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**Code:** M.9.7 P901  
**Domain:** Living in urban worlds  
**Teachers:** B. WEBER, V. MOIMAS, J. ZETLAOUI

**ECTS credits :** 11  
 Number of weeks : 16  
 Nber of hours / semester : 112  
 Nber of hours / week : 7  
 Personal work : 128

**PROJECT**

**FROM SITUATIONS OF USE TO PROJECT SITUATIONS.**

**PARTICIPATIVE URBANISM AND ARCHITECTURAL CONCEPTION**

**OBJECTIVES** Students already familiar with the fundamentals of urban projects and the relation between uses and architectural conception will pursue and deepen their theoretical and methodological project tools for renewing urban spaces. Through exchanges with local actors, they will come to understand how to construct then how to submit a reciprocal examination of strategies for urban development and taking positions in the form of concrete development proposals to citizen debate.

**CONTENT** In development projects today, we are regularly requested to let inhabitants, as citizens, speak their minds. Although such practices appear to be more widespread elsewhere, in France, admitting the necessity (especially since the 2000 SRU Law) of this contrasts with the reality of production cultures that still seem to largely oppose it. Through questioning the specific responsibilities of the architect in the project process involving inhabitants, this course aims at understanding these inertias and seeking, in real situations, the angles of approach and concrete possibilities to help practices develop positively. Without in any way giving up on the requirement for a high quality in architectural and urban conception, the course aims at integrating this working into a participative urbanism process, all while considering as a secondary objective the availability of spaces as resource for the interplay of actions and interactions with the inhabitants. In order to analyze these questions in depth, the course emphasizes critical reading of situations and action logics, as well as evaluating situations of use of existing and future spaces. It will also include participative experiments aiming at co-constructing the project with inhabitants, from the initial proposals through to various stages in implementation, bringing together programming and conception phases. Several project leads will be proposed from the beginning. However, the real stakes and problems involved in the project will emerge from the approaches undertaken by students (diagnosis, programming, conception) including specifically: relations of the inhabitants with their everyday life context; on-site observations and survey and critical analysis of the projects under way; students' own concerns (for example, in doing their master's memoir). There will be a 3-day study visit to a European city involving the engagement of inhabitants in urban renewal, with both older and more recent experiences. We thus propose a study programme among those on urban renewal project processes that will be fruitful, in light of the French situation, through a context of political implementation that takes into consideration local cultures that are political, administrative, associative and professional.

**ASSESSMENT** Continuous assessment 50%, final assignment 50%, including evaluation of: taking responsibility for the approach carried out, including awareness of the risks involved; the pertinence, rigor and depth of theoretical and methodological choices; the appropriateness to the project situation, inhabitability and constructability of the spatial dispositives proposed; the clarity of presentations, and how to exercise quality listening during exchanges, as well as the capacity to integrate critical suggestions.

**WORK REQUIRED** Field work; preparation and exchange with various local actors; developing analyses, exploratory projects and then the test project; formulating regularly renewed project problems including the end-of-studies project. In this sense, the course involves a partially mutualized "end-of-studies" preparation for the different stages of work involved.

**LANGUAGE** Course taught in French  
 Language of communication: French and English

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**Code:** M.9.7 P902  
**Domain:** Living in urban worlds  
**Teachers:** O. BOUCHERON, C. BLANCOT

**ECTS credits :** 11  
 Number of weeks : 16  
 Nber of hours / semester : 112  
 Nber of hours / week : 7  
 Personal work : 128

## PROJECT

### DETOURS II – ULAANBATAR AND YANGON WORKSHOPS

#### OBJECTIVES

This in-depth project unit is associated with the Yangon (Rangoon) 5 International Workshop to be held in February 2021.

It precedes and anticipates the supervision of the diplomas of the unit PFE02, Return.

This association allows students to confront a unique extra-European urban situation by setting up a real fieldwork. On the spot they have the opportunity to develop faculties of observation, description and understanding of singular architectural devices and urban systems, then to draw lessons and principles from them in order to envisage their transposition (or not) during the phase of proposals and production of projects.

ENSAPLV teachers: Olivier Boucheron (architecte-nelobo), Christiane Blancot (architecte-APUR)

#### CONTENT

YANGON 5: Between culture and nature

In 2017, we focused on the issue of rehabilitating housing in the city centre, the downtown area of Yangon (Rangoon), which was designed in the 1840s on the model of the grid in New York and London.

At the beginning of the twentieth century, the measures, arrangements and distances applied to the design of the first Rangoon enabled the urbanisation model inherited, or inspired, by Richard Newcourt's gridiron for the reconstruction of London and those of Philadelphia or Manhattan, to accommodate the tropical condition of this city (workshop 2018), born modern in monsoon country.

Before Yangon, Rangoon, then again Yangon (since 1989), there was, as early as the 11th century, Dagon, a small city of monk fishing villages and monasteries grouped together on mounds around the zeidi - Burmese term for stupa, funerary mound or reliquary monument characteristic of Buddhism - , pagodas, the most venerated of which is the Shwedagon. In this land of water, rice and gold, the river port opened up very early on to trade with the open sea. Colonized by the British, Burma ensured the supply of rice, oil and wood to the Empire and allowed it to compete, then to thwart the French attempts at expansion from neighbouring Indochina towards Yunnan and the vastness of China. From 1853 onwards, they deployed on this delta topography the centre of their colonial project by draining, channelling and filling in the liquid expanse of the city, partly destroyed by fire in February 1841.

In 2019, we worked on the natural enclaves of the grid and its close periphery: from the banks of the Yangon River and all the port rights-of-way, to the few parks and squares set in the blocks, from the gardens in between the bars, to the traces of the original forests, mangroves and savannahs.

In 2020, with Burmese ways, we studied this very local way of both seeming to succumb to the temptations of the dominant model of metropolization and at the same time, paradoxically, resisting its devastating effects.

In 2021, with Between culture and nature, we will be working in the central district of Kyauktada (a place emblematic of the reification of the British colonial project) and on the banks of the Yangon and Pazudaung rivers.



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*Code:* **M.9.7 P902**  
*Teachers:* O. BOUCHERON, C. BLANCOT

**ECTS credits :** 11  
Number of weeks : 16  
Nber of hours / semester : 112  
Nber of hours / week : 7  
Personal work : 128

**ASSESSMENT** POUR YANGON:

Travail d'approche de la ville tout au long du semestre en quatre exercices:

- Recherches bibliographiques, revues de presse et recherches thématiques
- Cartographie historique sur QGis
- Recherches architecturales à partir d'un travail de maquette
- Projet architectural et urbain 'à distance'

**WORK  
REQUIRED**

**Places for this teaching being limited (about 12 places), we would like each student interested in these fields to send us a short letter of motivation, explaining in particular his or her background and the themes he or she would like to address for his or her future master's thesis.**

Applications should be sent to [olivier.boucheron@gmail.com](mailto:olivier.boucheron@gmail.com) and [Christiane.BLANCOT@apur.org](mailto:Christiane.BLANCOT@apur.org) during the choice week at the beginning of the academic year.

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**Code:** M.9.7 P903  
**Domain:** Living in urban worlds  
**Teachers:** G. GRIBÉ, A.G. COHEN, V. LAVERGNE, P. CHAVANES

**ECTS credits :** 11  
 Number of weeks : 16  
 Nber of hours / semester : 112  
 Nber of hours / week : 7  
 Personal work : 128

## PROJECT

### FORMS OF PERI-URBAN FABRIC AND RESIDENTIAL PROJECTS IN THE PARIS AREA.

#### OBJECTIVES

Develop analysis and project tools as well as a corpus of knowledge enabling students to elaborate projects on urban forms and produce residential fabric in the critical context of contemporary urban peripheries.

#### CONTENT

Case of the Paris metropolis.

This exercise will be carried out on sites of medium dimensions (50-100 hectares) in the Paris suburbs, chosen for their composite, hybrid and weakly structured character, due to the chaotic succession of diffuse interventions, separated functional zones, network strips and heavy infrastructures, with scattered new neighbourhoods resulting from the series of urban doctrines of the last decades of the 20th century. The first step, though in-depth urban analysis of the context and its historical development, to present the territorial, morphological, fabric and typological structures already in existence, understand their appearance and changes, and explore the potential for development that would lead to more dynamic, coherent, readable and thus, urban, schemes.

On the basis of this analytical effort, students will work in groups of 5-8 to formulate hypotheses about new urban forms, reorganisation and requalification of public space and the roadway systems, new uses and division of land, before deciding on typological and programmatic choices. These elements will be summarised at the appropriate scales (between 1/5000 and 1/1000) to make up the major options for a guide plan open to inevitable adaptations and yet morphologically rigorous.

This document should provide for managing, in the middle- and longer-term (between 10 and 30 years), the process of change entailing strategic finalities and enabling the conjunctural adjustments necessary, be they morphological or programmatic.

Students will be encouraged to measure the pertinence of their hypotheses at the finest scales (1/500 and 1/200) and test out the relationships between architectural solutions (at the building or building group level) and urban schemes, by creating a project concerning a residential ensemble of considerable size (several dozen dwellings).

Particular attention will be paid to the relationships at the ground-floor level, between public and private spaces, group and individual use, representation and inhabitant involvement.

A series of presentations and thematic courses related to the history of cities and founding moments in theories, doctrines and urban experiments, as well as courses given by the teachers on housing architecture, will complete and enrich the project work.

Several visits to neighbourhoods emblematic of these experiments will be undertaken during the semester and will provide a concrete view of the academic approach to the subject.

The project contexts the most frequently met with concern renewal of urban social housing neighbourhoods, the priority zones for urbanisation, housing projects and large complexes, conversion of brownlands, requalification of the perimeters of major infrastructures, etc.

#### ORGANISATION

This project course is organised on the basis of a complete day.

Mornings are devoted to presentations, courses and visits, afternoons to exercise correction.

In the first weeks, group work will be directed at analysis of sites, then at the first major orientations of an urban project, shaping public spaces and roadways, programming, typological choices and their localisation, landscape structure, etc. The last weeks will be devoted to preliminary architecture projects to be carried out in groups of two or three students.

*Code:* **M.9.7 P903**

*Teachers:* G. GRIBÉ, A.G. COHEN, V. LAVERGNE, P. CHAVANES

Nature of the work required:

- Graphic analysis and written commentary, density and comparative calculations,
- Maquettes of sites,
- Global planning project and detailed argumentation,
- Plans, cross-sections and volumetrics of architecture projects, typological references, study maquette, etc.

Continuous assessment 40%, presentation of final exercise 60%

**REQUIREMENT**

Knowledge of housing architecture and issues of urban habitat.  
Interest in urban theories, territorial scales and the urban forms/architecture articulations.

**Code:** M.9.7 P9o6  
**Domain:** Living in urban worlds  
**Teachers:** K. NOUSIAINEN, A. PORTNOÏ

**ECTS credits :** 11  
 Number of weeks : 16  
 Nber of hours / semester : 112  
 Nber of hours / week : 7  
 Personal work : 128

## PROJECT

### ACTION IN THE HEART OF THE CITY : CHERBOUG EN COTENTIN

#### OBJECTIVES

The purpose of the workshop is to study medium-sized towns and the planning of their territory. This year we will work on the territory of Cherbourg-en-Cotentin.

The educational objectives of the semester are to make you aware, as future professionals, of the manufacture of the city and its governance. It is a question of learning to build a project at the scales of the territory and and in contact with actors of the manufacture and governance (municipality, technical and elected services, Land establishment, DDT, Urban Planning Agency, ...). The Workshop is based on a partnership with these different actors, who finance your travel, meals and accommodation on site.

#### CONTENT

The work will have to question in particular:

- the building and the block in the city center (adequacy of housing to the territorial, economic and urban challenges of centrality, diversification of the uses of the feet of buildings and the DRC),
- the quality of the public space (dimension of representation, place of life, comfort of movement and connection, management of coastal risks),

New forms of housing related to issues related to urban resilience

- new forms and programming of cultural, tertiary or mobility-related facilities,
- the importance of the «city narrative» in strengthening the attractiveness of the city of Cherbourg-en-Cotentin.

#### ORGANISATION

The work carried out during this semester has a very strong collaborative dimension.

For this reason the active and regular participation of each student is required.

The weekly routine work sessions will be organized in two parts with a break in between.

1. The first part will be devoted essentially to the plenary presentation of the work of each group. Short presentation whose format (number of images and presentation time will be specified each week). These presentations will be followed by a cross-criticism time (a rotating criticism group will be designated for each presenting group).
2. The second part of the session will be dedicated to the work of workshop and production itself.

#### ASSESSMENT

The final grade of the semester will take into account the grades of intermediate renderings, a progress grade («continuous monitoring») and the jury's grade at the end of the semester. 40% for continuous monitoring, and 60% for the final project.

The final report at the end of the semester will show the progress of the work of understanding the issues at the different scales of the territory, the place, and the project. Diagrams, drawings, representations in 3D, will be concentrated in 6 to 8 panels A0 to which will be added models and a collection of elaborate texts. Your projects will be the subject of an exhibition.

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*Code:* **M.9.7 P915**

*Domain:* **Living in urban worlds**

*Teachers:* P. BELIN, J. VINÇON

**ECTS credits :** 11

Number of weeks : 16

Nber of hours / semester : 112

Nber of hours / week : 7

Personal work : 128

## **PROJECT**

### **ARCHITECTURE OF COLLECTIVE HOUSING:**

### **THINKING AND BUILDING THE TRANSITION**

#### **OBJECTIVES**

The objective of the workshop is to explore the capacity of collective housing architectures to constitute a response to environmental and societal changes, to contribute to the transformation of urban worlds to move towards a neutral ecological balance.

#### **CONTENT**

The workshop is envisaged as a place of exploration, questioning and production of research by the project. Bio- and geo-materials are one of the fundamental elements of the project exercise, for which the use of the research model is privileged. Experimentation, as a pedagogical tool, promotes comparative approach, theoretical understanding and thinking, and engages avenues of prospective reflection that questions architecture and construction in their relationship with the environment.

#### **ASSESSMENT**

Continuous monitoring and jury at the end of the semester. The final presentation consists of the exhibition of all the documents (drawings and models) to expose the work process since the first sequence. It must allow the understanding of work at four scales: the urban scale, the scale of the building, the scale of the dwelling, the scale of the detail.

Language of the course: French and rendered in French  
Languages of communication: English, Spanish, Italian

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Code: **M.9.7 P905**

Domain: **Arts and Scenography**

Teachers: M. MAZLOUMAN, J. GAUTEL, M. DESSARDO, G. GRIBÉ

**ECTS credits : 11**

Number of weeks : 16

Nber of hours / semester : 112

Nber of hours / week : 7

Personal work : 128

## PROJECT

### SCENOGRAPHY AND ARCHITECTURE: FROM THE WORK OF ART TO SPACE

#### OBJECTIVES

The function of scenography has always been closely linked to architecture: it consists in inventing and materialising space and the itinerary of an imaginary journey to which theatre, the city or ceremonies invite the spectator. Scenography offers a vast field to study the conception of spaces in which transmitter and receiver meet, and in a larger sense, every kind of space enabling contact, exchange and representation. It allows the relation of the public to a work of art in a symbolical context.

#### CONTENT

Our teaching of the architecture project is at the crossroads of different artistic and literary disciplines in an approach to conceive appropriate space. Our course is enriched by interaction and hybridisation of different creational approaches. The educational methods are based on transdisciplinarity; different disciplines work in synergy on questions of the architecture project. For this, scenography is our guideline.

We shall study the material and technical frame of representation and its articulation with fiction, experimenting scenography in its wider sense – theatre, choreography, visual arts – and their use in architecture. We propose two projects :

1- An exercise in collaboration with a cultural institution in an existing context ;

2- Experimentation: the second project, which can lead to the diploma PFE (school-leaving project), takes a work of art (a theatre play, a literary text, an art work, choreography ...) as a starting point. The student proposes an architectural programme (experimental theatre, new representation space, circus, public square, museum ...) based on his/her scenography.

#### ORGANISATION

1 - Scenography exercise in collaboration with the Théâtre de la Colline and other scenography and architecture schools, with the stage director, scenographer and the theatre's technical team.

2 - The architecture of "your scenography". This second project is based on an individually chosen subject, programme and site, and is continued during the second semestre, with an intensive workshop, finally leading to the PFE (school-leaving project) diploma.

#### LANGUAGE

Course given in French

Communication languages: English, German, Italian, Spanish

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**Code:** M.9.7 P907  
**Domain:** Architecture of Milieux, Territories, Landscapes  
**Teachers:** C. SECCI

**ECTS credits :** 11  
 Number of weeks : 16  
 Nber of hours / semester : 112  
 Nber of hours / week : 7  
 Personal work : 128

## PROJECT

### OBJECTIVES

The following are the objectives of this workshop:

- develop a project approach that starts with architecture to move on to the city and territory
- introduce an approach in which on-the-ground observation is at the emergence point of projects
- work in cities subject to rapid change and understand them through the process of transformations and metropolitan decisions
- take on the challenge of working on an international level, far away, coping with cultural differences (urban culture vs. project culture), useful nearer home, when the issues at stake involve unusual questions

### CONTENT

Entitled 'Learning from Indian Cities', this project course is articulated in cooperation with the BVCOA College of Architecture in Navi Mumbai. It offers a semester-long pedagogy organized around a workshop in India.

A GENERAL THEME: BECOMING INDIAN 'FOUNDATION CITIES'.

India's strong economic and demographic growth raises questions about the future of the ancient centres (or foundation cities, pre-industrial cities, pre-colonial cities). These cities, with their extraordinary urbanity, are today undergoing a twofold change: their abandonment by the middle class and major transformations because these centres are little, if any, documented.

In this context, this course proposes to document the old centres and, on this basis, to ask the question of their future from the perspective of an urban project.

ONE CITY, ONE CHALLENGE: CHITPUR ROAD, KOLKATA

The 2021 workshop will take place for the second consecutive year in Kolkata (Calcutta until 2001) and in particular on Chitpur Road, the oldest street in the city. After having approached it from the «urbanity of trades», heavily affected by the Covid-19 pandemic, this territory will be approached this year by the «festival as a project». These festivals punctuate the daily life of Indians and the time of Indian cities, which are transformed by ephemeral bamboo constructions, known as 'pandals', installed in public spaces as well as in large houses.

In Kolkata, the workshop will involve two local actors active in Chitpur Rd: Kamalika BOSE, architect, founder and director of the NGO 'Heritage Synergies India', whose objective is to cross heritage values (architecture, music, crafts, etc.); and Laurent FOURNIER, architect in Kolkata, specialist of the 'Durga' Puja festival and the 'Pandals'. These actors will enable the production of the workshop to have an academic value (learning from Indian cities) but also a role of expertise on Chitpur Rd by highlighting possible projects allowing local actors to engage in a new debate.

In France, the workshop will be linked to the festival of Charleville-Mézières, and its World Puppet Theatre Festival, which will allow to prepare and have a close reference point.

AN APPROACH: FROM OBSERVATION TO THE EMERGENCE OF SITUATED PROJECTS

To do this, each workshop is built on a 'patient fieldwork', combining observations of physical space (surveys) and social space (interviews). These observations, even if they are often fragmentary, make it possible to detect urban know-how, transformations at work and evolutionary trends in the old centre. It therefore aims to 'construct a project situation'.

Code: **M.9.7 P907**

Teachers: C. SECCI

**ASSESSMENT**

There is expected to be a strong interest in:

- the urban, cities and territory as spaces, processes and actors;
- a patient fieldwork using all working methods: sketch, urban survey, film, interview, ... ;
- the practice of the international intensive workshop;
- Indian cities and their urban processes.

The 'project as a process' (50% in continuous monitoring) and 'the project as a response' (50% stage and final reports).

**WORK  
REQUIRED**

The semester is organized for a 15-day intensive workshop in Trivandrum :

- BEFORE DEPARTURE: a twofold preparatory work aiming (1) to familiarize the student, already in France, with a field approach (architectural & ethnological) based on observation and (2) to learn to read and understand the space of Indian cities, in particular that of Kolkata, from the drawing;
  - INTENSIVE WORKSHOP IN KOLKATA: a fieldwork in cooperation with BVCOA of Navi Mumbai and active local actors and in particular «Heritage Synergies fondation India».
  - BACK TO KOLKATA: development of the work carried out in a workshop in an EFP.
- This course is given in French in Paris and in English during the workshop in India.

**LANGUAGE**

This course is given in French in Paris and in English during the workshop in India.



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**Code:** M.9.7 P908  
**Domain:** Architecture of Milieux, Territories, Landscapes  
**Teachers:** A. LAPASSAT, M. HOESSLER

**ECTS credits :** 11  
 Number of weeks : 16  
 Nber of hours / semester : 112  
 Nber of hours / week : 7  
 Personal work : 128

**PROJECT**

**LANDSCAPE/S - ARCHITECTURE, CITIES AND TERRITORIES IN TRANSITION.**

**OBJECTIVES**

A GLOBAL PROBLEMATIC, A LOCAL RESOLUTION, between theory and practice.

The objective of this workshop is to study and critique the proposals for movement of the City in Transition and illustrate this possible transformation of the ensemble of concrete urban territory spaces in the ‘Communauté de Communes’ of Gally Mauldre, which is mainly rural and peri-urban in the Yvelines département. This will involve responding to the issues of the Parisian metropolis, thinking through and organizing development of the territory, not from the centre-city but from its periphery, by examining the possible inversion of the relationship city / country through transformations of the peri-urban.

Our approach will thus involve:

- understanding a system or problem globally
- observing how the parts of a system are linked
- repairing deficient systems by applying ideas learned from durable, mature systems that work
- learn from these natural, working systems to plan integration of human being in ecosystems they live in and have damaged with their agricultural and urban systems, most of the time through lack of awareness or ethics.

The principles of the Transition Town will be analyzed, critiqued, by exploring their potential for recomposing architecture, the city and the landscape from the territorial scale to that of the building, envisioning the project as an illustration of the potentials of these territories.

**CONTENT**

In search of a more ecologically viable society, many public and private initiatives tend to modify the way buildings and public spaces are designed. Among these initiatives, the “Transition Towns” movement endeavours to achieve the objectives on a global scale by proposing methods and tools to attain this on a local scale.

A movement or network of local and citizen initiative, the Transition Town was inspired by the principles of permaculture to think and construct a society in which intelligence, soberness and efficiency would enable the energy and ecological transition necessary towards a society ‘without petroleum’. This movement has gone worldwide and has found local roots in citizen initiative.

The movement was born of a university exercise on experimenting with energy reduction carried out in 2005 by students in the applied sustainability course of Kinsale (Ireland) University under the direction of Rob Hopkins, a permaculture teacher. In 2006, the town of Totnes (GB), with Rob Hopkins, launched itself into applying the actions that would enable it to implement the means of transition towards a non-petroleum world. Rob Hopkins is today considered the founder of this movement and Totnes as the first experiment carried out on an urban scale.

The necessity of entering into transition is defined by Rob Hopkins in answer to the issue of peak oil (how to adapt our lifeways to this dearth, then disappearance) linked to climate change. On the contrary of some discourse, it is not a question of limiting or constraining in order to safeguard what could be. It is a question of recognizing that change is underway and that the finest thing a human community with knowledge and technologies it already possesses is to think through this adaptation process and enter a resilience process enabling us to redefine our actions with respect to the living world and prepare our surroundings so that they can endure.

Whereas most of the discourse on energy transition is anxiety-producing and militant, often confrontational to convince people of the necessity of changing laws in order to impose another order, the actors in Transition

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Code: **M.9.7 P908**

Teachers: A. LAPASSAT, M. HOESSLER

Towns base their work on optimism, collegial thinking, project-sharing and implementation of work in the most simple ways.

If the subjects taken up by the Transition Town movement are similar to other current initiatives (energy and food autonomy, search for lesser environmental impact, etc.), the particularity of this approach is to see it as inherited from the agricultural model of permaculture, not seeing the transition as a sum of juxtaposed actions, but linking these actions into a whole project, seeking coherence between care for nature and for the Earth, habitat, tools and technologies, teaching and culture, health and well-being, finance and economy, property and governance. The transition approach is a project undertaken and taken over by a citizen group that has collegially decided on the basis of research into specific knowledge about each field concerned (habitat, education, culture, agricultural production, energy production), and sharing them, for an immediate and iterative implementation.

The most frequent initiatives are about food autonomy (especially in towns where many alternative gardens are experimenting with short circuits for food supply), but also alternative 'local' money (whether the "peach" notes in Montreuil or the Ungersheim "radishes", 50 local money forms are presently in circulation and another 70 are coming up), the mutualization projects for energy transition for real estate ensembles, and, obviously, the construction of buildings.

Management of public space is also part of the Transition initiatives, even if it is less frequently mentioned by the Transition Town actors. The ecological issues and the budget difficulties of many townships have led to thinking of public space according to economizing means and energy (public lighting, cleaning, differential management of planted areas, etc.). The choice of plants used has become more oriented towards fitting in with the natural milieu, the ecosystem.

Hence, these initiatives are public, collective and individual. Each one is virtuous and useful, rarely set in a real relationship through the prism of their common potential for redefining our territories, in functional as well as technical and aesthetic terms.

This back-and-forth between the territorial and the building scale will be at the heart of our approach. After a brief analysis of the whole, carried out collegially, individual work will enable each student to undertake an in-depth study of a particular situation. useful, rarely set in a real relationship through the prism of their common potential for redefining our territories, in functional as well as technical and aesthetic terms.

This back-and-forth between the territorial and the building scale will be at the heart of our approach. After a brief analysis of the whole, carried out collegially, individual work will enable each student to undertake an in-depth study of a particular situation.

**ORGANISATION** Courses will be once a week, focusing on making a coherent link between project thinking and its expression to lead to a project based on a real capacity for well-argued proposals. The workshop is organized in correction / debate sessions between the students themselves and the teachers. A territory survey will be carried out with teachers at the beginning of the semester. The teaching team is made up of an architect and a landscape designer.

**ASSESSMENT** The semester will have a first report on strategies identified following the site visit, meeting local actors and personal work on awareness. Following this, students will decide on the programme they think pertinent to develop in this context. The project design will then be the object of an intermediate assignment and final work at the end of the semester. Intermediate assignments will be presented to the Paysage/S (Landscape/S) teachers and the political or citizen actors in the 'Communauté de Communes' of Gally Mauldre.

**LANGUAGE** Course language: French  
Communication languages: French

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<b>Code:</b>	<b>M.9.7 P909</b>	<b>ECTS credits :</b>	<b>11</b>
<b>Domain:</b>	<b>Architecture of Milieux, Territories, Landscapes</b>	Number of weeks :	16
<b>Teachers:</b>	E. DANIEL-LACOMBE, Y. GOURVIL	Nber of hours / semester :	112
		Nber of hours / week :	7
		Personal work :	128

## PROJECT

### CONSTRUCTING URBANITY IN AREAS EXPOSED TO NATURAL RISKS

#### OBJECTIVES

Urban architecture, dialogue between city and nature:

We want to go beyond the city-nature and architecture-landscape opposition. Transforming attitudes will enable us to break with urban-dwellers' alienation from nature through the invention of a new architecture and new ecology able to bring a metamorphosis to today's city. It is thus necessary to learn to work on urbanised neighbourhoods with diverse problems and not preach for some catch-all utopia (tower blocks in nature, garden cities, eco-subdivisions).

#### CONTENT

Constructing urbanity in an area exposed to natural risks:

A group of students will prepare a project on the basis of studying an urban area exposed to a major natural risk. It will be up to the students to choose their site, but the type of risk envisioned will be given and will vary from one year to another – water (flooding, drought, storage and processing polluted water), air (storms, pollution, fire), earth (run-off, erosion, deep pollution). The project must concern an urban area and how to transform it. In this context, architecture must provide for a double role in the imagination: defensive retreat to shelter in whatever way deemed suitable, plus opening up to a new relationship with living species and nature. This will lead to the heart of a new aesthetics, entirely turned toward active reception of architecture and based on notions arising from contemporary landscape art.

Project corrections will involve interventions by various actors (CAUE 78/Council for Architecture, Urbanism and the Environment), project leaders, professionals on the ground?)

#### ORGANISATION

Elaborating a design working method will be interspersed with a limited number of seminar sessions.

#### ASSESSMENT

Continuous assessment 50% and final exam 50%

#### PREPARATION FOR

End-of-studies project 'Inhabited milieus – constructing urbanity in an area exposed to natural risks'  
Information and news on <http://milieuxhabites.wordpress.com>

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<b>Code:</b>	<b>M.9.7 P910</b>	<b>ECTS credits :</b>	<b>11</b>
<b>Domain:</b>	<b>Inventing within the existing: Heritage and change</b>	Number of weeks :	16
<b>Teachers:</b>	M. LOPEZ DIAZ, J. BRUTER	Nber of hours / semester :	112
		Nber of hours / week :	7
		Personal work :	128

## PROJECT

### SUSTAINABLE REHABILITATION ON THE SCALE OF THE CITY AND THE BUILDING RE-USE OF INDUSTRIAL BUILDING

#### OBJECTIVES

**Study on the Culture Capital 2019 cities of Plovdiv (Bulgaria), Matera (Italy) Gabrovo (Bulgaria)**

Among the course objectives, students:

- Will be in a professional situation in direct contact with people in charge and various actors in the city who will explain their expectations, the problematic stakes involved and the means at their disposal
- Have to carry out a multi-criteria diagnosis on the scale of the territory of urban fabric, the site and the building chosen. This diagnosis, methods for which will be provided them, will be at once technical and sensitive.
- On the basis of the diagnosis, they will be able to make renovation and rehabilitation proposals taking into account social, economic and environmental issues as well as the expectations of local decision-makers within the limits of their economic and organisational means.
- Since sustainable renovation and rehabilitation are at the heart of this course, students will have to come up with a project that will be quantifiable in relation to the issues at the heart of sustainable development (for example, resource management, waste, pollution, social participation in the project, etc.)
- The subject of water will be especially important in a transversal approach: as resource, a blue thread, biodiversity, social links, etc.
- Projects will have to demonstrate bioclimatic analysis, among others, on the urban scale first and then on the scale of the building and its site.
- Students will show they are able to listen to needs and local information, as well as to work in teams and individually
- They should come up with a proposal for urban renovation on the basis of both group and individual work to transform the use of an industrial building of their choice in the context of this renovation.

#### CONTENT

We will be working on cities with a culture of a thousand years that are seen not only through the needs of their inhabitants but also exposed to 'outside examination'!

One of the main issues is how to valorise what already exists all the while including modernity in an approach to sustainable development. We are working on cities where tradition and respect for heritage in the broad sense have to be brought into equilibrium with modernity, attractiveness, and the environmental, economic and societal issues. So, the question will be how to define this modernity without denying their history and identity! Consequently, how can we encourage recognition of the heritage value of these cities on the part of their inhabitants and the people who visit to discover them? This project workshop is oriented towards transformation of use of remarkable industrial buildings located in the heart of these cities. These abandoned buildings are located in prime real estate areas that are strategic for development of the cities in question (more than 25 buildings of the old tobacco industry in Plovdiv, over 50 in Gabrovo concerning various types of industry, mainly textile).

Special attention will be paid to the question of water: in Plovdiv, where the city and industrial buildings back up to the Maritza, a river that is being ignored! In Gabrovo, a city created in the Middle Ages organized around water and along the river it has a close relationship with! In Matera, a human occupation site since the Paleolithic, where the limestone soil made it impossible to hold rain water in the aquifer and water was collected in cisterns.

How can we redefine a "modern" handling of rainwater run-off inspired by ancestral practices? What developments should be envisioned?

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*Code:* **M.9.7 P910**

*Teachers:* M. LOPEZ DIAZ, J. BRUTER

**ORGANISATION** 1 cours per week, a trip to the site chosen with participation of a jury of people representing the city chosen and foreign teachers, among others.

10. Lecture series and courses enabling students to be immersed in the subject.
  - a. Local culture, climate, history of special issues...
  - b. On architectural and technical aspects of heritage involving use transformation
11. Choice and understanding of a multi-criteria diagnostic method on each scale
12. Group research on various subjects associated with the project
13. Choice of site
14. Carrying out the multi-criteria, generic and zenithal diagnosis
15. Subjective and sensitive analysis
16. Comparison of analyses of various teams
17. Setting up a strategy and programme on the urban scale
18. Setting up the architecture project (individual) that is part of the urban proposal (response to an urban, architectural issue with technical definition)

**ASSESSMENT** Intermediate work: multi-criteria diagnosis, sensitive approach, urban proposal and architectural project. Assessment of each student before different juries on the basis of the ensemble of his/her production within a working group for the diagnostic research, urban proposal and individual production of architectural project.

**LANGUAGE** Course taught in French  
Language of communication: French, English, Spanish

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Code: **M.9.7 P911**

Domain: **Inventing within the existing: Heritage and change**

Teachers: O. CHASLIN

**ECTS credits :** 11

Number of weeks : 16

Nber of hours / semester : 112

Nber of hours / week : 7

Personal work : 128

## PROJECT

### OBJECTIVES

Students will acquire the bases for real competence in a field: rehabilitation-restructuring of ordinary residential buildings, which represents a growing professional outlet for young architects.

### CONTENT

We propose to explore the theme of restructuring-raising of ordinary residential buildings in an urban environment in Paris and its suburbs, whether these buildings are older (“faubourg” building types of wood and plaster (or more recent (1960s to 1980s).

What is to become of a building heritage requires real consideration on the part of architects and they must be qualified to propose the best ways to achieve qualitative and lasting change for residential complexes. This may also involve raising, renewing the envelope, interior layout and possibly densification.

Raising building height, especially, is among the solutions being promoted by the city of Paris to overcome the dearth of housing in the city, as well as a way for condominiums in difficulty to finance rehabilitation to a certain standard of their buildings, especially in light of improving energy efficiency. Institutional owners may also wish to increase building space and thus to increase their own real estate.

Partnerships may be foreseen with private condominiums, with Paris social housing operators, for example, the two subsidiaries of the RIVP: Heneo (hostels) and Habitat Social Français, as well as with the Atelier Parisien d’Urbanisme (Apur) which called for thinking in this field as of 2014.

### ASSESSMENT

Regular progress in work, pertinence of analyses, coherence and quality of the final project in respect of the objectives set.

### WORK REQUIRED

The project, taken at multiple scales, at the urban level as at that of detail, will be developed through morphological and constructive studies of existing buildings leading to detailed plans and large maquettes

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**Code:** M.9.7 P912

**Domain:** **Inventing within the existing: Heritage and change**

**Teachers:** M. DUJON, G. PONTOIZEAU

**ECTS credits :** 11

Number of weeks : 16

Nber of hours / semester : 112

Nber of hours / week : 7

Personal work : 128

## PROJECT TRANSFORMATION(S)

### OBJECTIVES

Learn to design changes at several scales:

- Urban scale:
  - Understand and assess urban issues to transform the existing city into a greener city,
  - Open a reflection on the instruments of the urban level: historical and heritage studies, social issues, involvement of inhabitants and elected officials, urban studies adapted to the challenges of the project.
  - Exploration of methodological tools to improve the transformation of industrial heritage.
- Building scale:
  - Think of the mutation of the existing as an ecological and artistic stake to produce specific qualities (aesthetics, material, use, ...) that could not be achieved with new construction.
  - Master the techniques of surveying, constructive understanding and restitution of the existing
  - Know how to conduct a critical analysis on the construction techniques and quality of existing buildings
  - Open the reflection on the technical solutions to be used according to the type of frame.
  - Thinking about the spatial and technical relationships between original buildings and transformation (rehabilitation, extension, ...)
  - Benchmarking on the question posed by the site and international critical comparisons
  - Reflection on representation tools on an urban scale, development of an 'iconico-graphic' thinking
- Scale building (2/3 semester)
  - Heritage analysis of the types of buildings, the types of functions;
  - Urban and architectural programming

### CONTENT

- Architectural projects for the transformation of an existing building developed individually or in pairs (rehabilitation, extension, etc.) ;
- Development of technical and constructive details.
- Reflection on the adapted tools to highlight the qualities of the project and communicate with the public and elected officials (classic panels, physical models, digital models with internal video courses ...).

### ORGANISATION

- Coordinated collective analysis
- One-off urban project, oral presentation and rendering
- Architectural projects in pairs and individuals, classic presentation + model + digital model videos, oral presentation.

### ASSESSMENT

Urban analysis including one-off urban project (30%), Architectural project (66%), reading sheet related to the project (4% but mandatory).  
Minimum score for the architectural project: 8.

### LANGUAGE

Language of the course: French and rendered in French  
Languages of communication: English, Spanish, Italian

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**Code:** M.9.7 P913  
**Domain:** Conceive and Construct architecture  
**Teachers:** F. GUÉNA, E. LOCICERO

**ECTS credits :** 11  
 Number of weeks : 16  
 Nber of hours / semester : 112  
 Nber of hours / week : 7  
 Personal work : 128

## PROJECT

### URBAN PROJECT AND EUROPEAN CITIES

#### OBJECTIVES

This project addresses the urban scale and the issue of urban systems in relation to the use of digital tools, available in the MAACC laboratory, for use in special designing.

The objective is twofold:

Objective 1: To design an urban space in Paris as part of the Grand Paris project;

Objective 2: To share knowledge of the urban projects and to share experience between students of architecture in Paris la Villette and the Barcelona and Hamburg schools.

#### CONTENT

Objective 1 content:

Working on a site in Paris - Paris is here taken as the reference city on an international scale. The area along the Seine between Paris and Ivry will be studied aiming to produce a development project by connecting different scales (spatial, political, social, economic, etc.) in the city of Paris and the Grand Paris project. From a programme which includes activities, equipment and housing, formalisation of an urban and ground plan and sections (of 1/5000th; 1/1000th, 1/500th) is required.

The components of the urban system should be made clear: transportation / circulation; connection and relation with the Seine; Nature and energy; public space / private space; diversity programmes and space frames (templates and typologies).

Here the digital tool is used to build a programmatic system for the development of an innovative urban and architectural style.

Objective 2 content:

A sustainable cooperation with schools of architecture in Barcelona and Hamburg must be created, in order to establish teamwork on different urban realities and to work together on common themes. A tool for sharing and communication over the Internet will be used for this purpose. For this first year, the theme will be water, namely: banks, energy, biodiversity and transport. International students wishing to make a P.F.E. (final study project) will continue this work in the 10th semester and obtain a Diploma Supplement in accordance with the ERASMUS courses.

#### ORGANISATION

Corrections will be on a weekly basis and their programme will be provided.

For the first year, each school will be working on its own site on the theme of water and will have the freedom to evolve the project and its programme.

The work will be done by different groups of 3 people, including the foreign students through web communication tools and sharing.

#### ASSESSMENT

Assessment per each phase with oral presentations and justification of the analysis and concept methods

- Critical analysis of the site and studies of the urban politics involved.
- Proposal for a programme and an urban system.
- Digital proposals of several urban solutions.
- Details at 1/500th of the urban system: plans, sections, facades.
- Details at 1/50th of the structural envelopes.
- Views of urban spaces and final report.
- Parallel to the final report there must be a report on the progress of two other schools and the collaborative work between the students.

Cooperation and coordination with other EU countries  
 AIC workshop



**Code:** M.9.7 P914  
**Domain:** Conceive and Construct architecture  
**Teachers:** F. GAUBIN, V. POIRIER

**ECTS credits :** 11  
 Number of weeks : 16  
 Nber of hours / semester : 112  
 Nber of hours / week : 7  
 Personal work : 128

## PROJECT

### ARCHITECTURE, REHABILITATION, TRANSFORMATION

#### OBJECTIVES

The objective of this project unit is:

- to increase the competence of architecture students to design the architecture project with awareness of the reality of the contexts (cultural, economic, land...).
- to develop their ability to mobilize their technical knowledge at the right moment in the project design process and thereby deepen the relationship between architecture, constructive requirements and technical cultures,
- to address the process of materialization of the project: the objective is to develop the project to the point of taking a position on the approach to implementation, and to establish the choice of materials and products, design and represent the details.
- to confront the students with a project related to an existing building: the aim is to develop the project by evaluating the potential for extension, raising and rehabilitation of the existing building.

#### CONTENT

The project unit, in order to enable the materiality of the project to be addressed in the short time frame of the semester, limits the project to the scale of a building, with a precise programme, which does not of course exclude contextualized reflection, nor to consider the project within a broader urban issue. But the project work will be oriented towards the building in order to develop a reflection and a project on the scale of the building.

The general phases of progression will be :

- critical analysis of the context and the programme,
- the precise survey and diagnosis of the existing ones;
- the compilation and synthesis of what constitutes the regulatory framework (PLU, fire, accessibility, etc.).
- the search for reference elements, the development of founding ideas, of generating concepts, which implement architectural and technical culture,
- the 'architectural layout': the project, its different scales (from global to detailed), its different stages (the progression of choices), its different evaluations (relevance, efficiency and coherence),
- the means of its materialization and the evaluation of the orientations taken. The experimental or innovative character will be assessed both from the point of view of experimenting with new tools and prescribing new materials, accompanied by performance measurements and/or evaluations.

Intermediate reports will be organised with the presence of external guests.

Specific interventions by specialists will be organised (BET, companies, etc.).

**Code:** M.9.7 P915  
**Domain:** Conceive and Construct architecture  
**Teachers:** S. WACHTER, D. LEFRANÇOIS

**ECTS credits :** 11  
 Number of weeks : 16  
 Nber of hours / semester : 112  
 Nber of hours / week : 7  
 Personal work : 128

## PROJECT

### LIVING LABS AND THE ARCHITECTURAL AND URBAN PROJECT

#### OBJECTIVES

Living labs represent a new way of involving inhabitants in the urban and architecture project. It is a question of co-constructing the project with the inhabitants, from initial intentions to the different stages in implementation including conception and programming stages.

This workshop aims at setting up a Living Lab approach on one or two sites to be chosen among the following towns: Montreuil, Fresnes, Grigny, Taverny, Longjumeau.

The approach proposed is set in the framework of a research-experimentation financed by the National Research Agency and the ERA-Net/Smart Urban Futures Programme of the European Union. It brings together researchers, architect-urbanists, management experts and students from the Free University of Brussels (Centre for Urban Research), the Politecnico of Milan (Department of Architecture and Urban Studies) and the ENSAPLV. We aim to compare the Living Lab approaches carried out in different neighbourhoods and cities in these countries in order to bring out common visions and good practices. Relations of work and workshops are planned with these partners and also with the project workshops of the Versailles and Rouen Architecture Schools involved in this research-experimentation.

The Living Lab approach consists in:

- Selecting the sectors, sites and perimeters of projects. Carrying out a prospective diagnosis of these sectors involving different scales of the urban project and architecture.
- In relation with the various actors and parties involved in urban policies and housing of the sectors concerned, setting up a framework for reflection and work favouring an effective way to do a Living Lab. Participating in the efficient functioning and leading of the Living Lab/
- In the Living Lab framework, setting up urban and architectural transformation scenarios for the sectors concerned by taking into account the stakes and problems involved in ecological and energy transition
- Co-constituting an urban and architectural programme integrating needs and requests of inhabitants
- Formulating urban and architectural proposals using different scales of the project : neighbourhoods, public spaces, buildings

#### ASSESSMENT

Urban analysis, scenarios, programming, cartography at different scales, plan, cross-section and volumetries of architecture projects, study maquettes

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Code: **M.9.8 SH901**

Teachers: A. DE BIASE, P. ZANINI

ECTS credits : 2

Number of weeks : 14

Nber of hours / semester : 21

Nber of hours / week : 1,5

Personal work : 23

## SOCIOLOGY

### SOCIOLOGY: INHERITING THE CITY

#### FOR AN ANTHROPOLOGICAL APPROACH TO TIME AND URBAN TEMPORALITIES

**OBJECTIVES** Introduce students to a time approach

**CONTENT** INHERIT THE CITY  
FOR AN ANTHROPOLOGICAL APPROACH TO TIME AND URBAN TEMPORALITIES

The work on times that the course proposes consists in questioning the linearity of history - which would like a past that has definitely been, a fleeting present, and a future that is not yet - to question it in order to understand how in practice, as much for the inhabitant, the architect as for the researcher, the «field of lived experience», and its «horizon of expectation» are continually intertwined to build what is called the «present». Articulating times then becomes a means of apprehending urban transformations. How are their times conceived, lived and metabolized (manufactured) by territorial actors and inhabitants? Working on the temporal dimension makes it possible to make the «small scale» of daily tempos dialogue with the spatial and temporal «large scale» of the horizons of change, and thus to bring out another narrative and an experience of a more complex and often unexpected territory (space). The aim will be to understand how work on time and urban temporalities can be a key to a new reading of the city. The aim will be to present a series of research projects developed within the LAA ([www.laa.archi.fr](http://www.laa.archi.fr), Laboratoire Architecture Anthropologie, the school's research unit), as well as research in progress, in order to test the theoretical issues against the real world and to enable students to understand the analytical devices used.

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Code: **M.9.8 PH901**

Teachers: A. TÜSCHER

ECTS credits : 2

Number of weeks : 14

Nber of hours / semester : 21

Nber of hours / week : 1,5

Personal work : 23

## PHILOSOPHY

### PHILOSOPHICAL FOUNDATIONS OF 'NEURO-ARCHITECTURE': TOWARDS A NEW ARCHITECTURAL THEORY?

#### OBJECTIVES

This course aims at enabling students to develop their capacity to analyze, evaluate and formulate philosophical arguments by focusing on relations between recent developments in the neurosciences and architecture. Neurosciences of architecture or neurosciences for architecture? This latter possibility, transformed into a promotional tool in its broadest and strongest version, recently acquired an ad hoc terminology: "neuro-architecture". We shall endeavour to evaluate the impact of this through a critical examination of philosophical theories (phenomenology, embodied cognition, etc.) that claim not only to found it, but also to make it into a new theory for architecture.

#### CONTENT

Neurosciences are among the recent fields in cognitive sciences that make it easier to understand the influence of built environments on the behaviour and mental functioning of human beings. In recent years, the notion of "neuro-architecture" has been taken up by some theoreticians of architecture, and even some practitioners, interested in the possibility of a "scientifically established" architecture. Although it is doubtless necessary to critique this movement, taking up the lines of arguments opposed to neuro-aesthetics, it is nonetheless appropriate to recognize its merits including the quest to refound architecture on the basis of better knowledge of the interactions between humankind and their environment, in particular, the built environment. Concerning this latter, embodied cognition takes advantage of new approaches focusing on the role of the body as well as on the structure of the space we live in, in cognition and experience. This notion of embodiment partially covers the concept of empathy ("Einfühlung") that, since the end of the nineteenth century, has been a major category in philosophical aesthetics. We shall study the real impact of this concept, as well as of its derivatives (embodiment, mental simulation, imagination, etc.) for architecture. In order to do this, we shall rely on literature from complementary fields in cognitive sciences, from neurosciences to philosophy.

#### ASSESSMENT

Personal written work to be handed in at the end of the semester (in French or English) in relation with the ideas explored in the course.

#### BIBLIOGRAPHY

Bibliographical references for the course will be given at the beginning of the semester.

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Code: **M.9.8 PH902**

Teachers: J. JAUPITRE

ECTS credits : 2

Number of weeks : 14

Nber of hours / semester : 21

Nber of hours / week : 1,5

Personal work : 23

## PHILOSOPHY

### ANALOGY, A GENEALOGY OF THE PROJECT

#### OBJECTIVES

Etymologically, analogy means 'proportion' for the Greeks. From the Latins with Vitruvius, 'proportio' becomes the relationship of a whole according to commensurable relationships. Seventeenth-century architectural theories indicate a turning point from which time on, as with Latin proportion, analogy no longer belongs to the order of knowledge. This new way of thinking engages those to follow it concerning the premises of elaboration of the project, the creative dimension of the architect present in the work of Aldo Rossi, for example. The course will question the relation between living myth and the reality of analogy conceived as a genealogy of the project. This paradoxical situation of analogy is vehiculated by recurrent questioning of the new in the history of ideas that can be identified in the thought and modern and contemporary practice of architecture, painting, art history or landscape history and aesthetics.

#### CONTENT

Analogy as a principle was long associated with the history of composition of proportions in architecture and thus was not the object of study proper dedicated to it in this discipline. This is no longer the case today, when analogy has attracted renewed interest. It stands at the crossroads of disciplines and standpoints towards analogy that we see fully revealed conceptions of the process of specific creation on the part of the architect in relation to the artist, landscape designer and a modern scientific approach in general. The course will focus on examining the notion of analogy, its unity, origins and the questioning it gives rise to in history in relation to present-day, distanced or not reception of the latter. In addition to the critical dimension of the course, we shall question the paradox borne by analogy and which is never truly resolved in conception of the project in the widest sense.

#### WORK REQUIRED

Individual written work or a presentation based on texts or architects studied in the course. The philosophical or architecture texts are taken from the following works according to the field involved and chronologically. These writings on analogy and its modern and contemporary reception are not exhaustive, but target the major trends in thinking.

##### - Philosophy

Référence source : **Aristote**, *Organon*, Paris, Flammarion, réimpr. 2005.

Réception moderne et contemporaine

**Ladislav Tatarkiewicz**, *L'esthétique associationniste au XVIIe siècle*, Extrait des « rapports et comptes-rendus » du II congrès polonais de philosophie tenu à Varsovie, 1927.

**Foucault**, *Les Mots et les Choses, Une archéologie des sciences humaines*, Paris, Gallimard, coll. « Bibliothèque des Sciences humaines », 1966.

##### - Architecture

**Aldo Rossi**, autobiographie scientifique, Paris, Parenthèses, 1988. (trad.fr. La version originale italienne date de 1990).

Réception de l'architecte

**Daniel Treiber**, « Aldo Rossi autobiographie, le sujet, l'affect, l'écriture », Les cahiers thématiques, Pratiques du langage, arts, architecture, littérature, Lille, Ecole d'architecture de Lille, Paris, Jean-Michel Place, 2003.

**Jean-Pierre Chupin**, *Analogie et théorie de l'architecture, de la vie de la ville et de la conception même*, Gollion, InFolio, 2010.

**Les projets Herzog et De Meuron**

*L'art et la littérature* (réception contemporaine).

**Jean-François Chevrier**, *L'hallucination artistique*, Paris, l'Arachnéen, 2012.

**Le paysage** (réception contemporaine).

Sous la direction d'**Alain Roger**, *La Théorie du paysage en France (1974-1994)*, Champ Vallon, Seyssel, 1995, Michel Conan, « *Généalogie du paysage* ».

**Bernard Lassus**, *Couleur, lumière...paysage-Instants d'une pédagogie*, Paris, Editions du patrimoine, 2004.

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*Code:* **M.9.8 CTA901**

*Teachers:* C. SOURTCHEVA KIROV

**ECTS credits :** 3

Number of weeks : 14

Nber of hours / semester : 42

Nber of hours / week : 3

Personal work : 23

## **PHILOSOPHY / SOCIOLOGY**

### **FIRE REGULATION/PROJECT ECONOMICS**

#### **OBJECTIVES**

Fire regulations: the objective of the course is to present in a very condensed way the principles and rules relating to fire regulations, for residential buildings and for establishments receiving the public.

#### **CONTENT**

Fire regulations: the course is built in two parts: the first one dedicated to the housing regulations and the second one to the ERP regulations. The course presents, for each of the two categories: the classification of buildings, the constructive provisions, while defining the different concepts and principles common or specific to each category. The course is based on a slide presentation.

#### **ASSESSMENT**

Fire regulations: the evaluation will be done on the table in limited time, the course material being authorized.

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Code: **M.9.8 CTA902**

Teachers: V. POIRIER

**ECTS credits : 3**

Number of weeks : 14

Nber of hours / semester : 42

Nber of hours / week : 3

Personal work : 23

## PHILOSOPHY / SOCIOLOGY

### LIFE-CYCLE ANALYSIS/INTERVENTIONS ON EXISTING ASSETS

#### OBJECTIVES

This Master 2 course is mainly intended to introduce students to two emerging and/or unavoidable themes: Life cycle analysis and Interventions on old buildings

#### CONTENT

##### 1. Life Cycle Assessment (Cveta Kirova, MCFA)

Evaluate a real estate operation using a multi-criteria approach and a standardized tool, in order to quantify the environmental impacts from the design to the end of life of an operation.

The three courses offered to students, concerning this approach, are based on the following objectives:

- To appreciate the complexity of the phenomena,
- To be initiated to a methodology
- To formalise the added value of this evaluation approach through concrete cases.

##### 2. Interventions on old buildings (M. Lopez Dias, V. Poirier, L. Berger, V. Comito)

This is a general introduction to the rehabilitation process with different focuses:

##### .2.a Diagnosis and pathologies (Mr. Lopez Diaz, MCF)

- The place of diagnostics in the different stages of a building's life.  
Example of functional diagnostics: the case of facades.
- Introduction to pathologies: «Obsolescence» of the building vs. «Pathologies» of the building.  
Transmission of a method of observation and analysis of pathologies.

##### .2.b Knowledge of old Parisian buildings: from the Middle Ages to the Art Deco period (V. Poirier, MCF).

- Dating of old buildings through the analysis of facades from the Middle Ages to Art Deco.
- Knowledge of old buildings: Adaptation to the ground (foundations), main structures (floors, carriers, framework), envelope.

##### .2.c Techniques of reinforcement and structural recovery, operating methods (L. Berger, MCFA)

##### .2.d Thermal renovation of old buildings (V. Comito, MCFA)

- Some reminders of thermal (notions of comfort, temperature felt, modes of heat transfer, insulation and inertia, insulator/thermal corrector, ITE-ITI- ITR, thermal bridges, solar protection)
- Hygrometry: water vapour diffusion, breathable walls, properties of insulation (hygroscopicity), vapour brake or vapour barrier.
- Thermal renovation strategies: case studies

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Code: **M.9.9 TEC901**

Teachers: P. HILAIRE

**ECTS credits :** 1

Number of weeks : 14

Nber of hours / semester : 21

Nber of hours / week : 1,5

Personal work : 23

## **ECOLOGICAL TRANSITION**

### **ECOLOGY IN DEBATE**

#### **OBJECTIVES**

Build an informed debate on the urban issues of ecological transitions and in particular those having an impact on the design of space projects and their production.

Deepen a reflection and a reasoned position with regard to the issues addressed.

#### **CONTENT**

With the current health crisis, the question of transformations of the earth's habitability conditions in relation to human activities has taken on an unprecedented scale. The theme of ecological transitions occupies an increasingly important place in the media sphere as well as in the political sphere and public policies. The subject is no longer just a matter of technical issues : it is eminently political, international and concerns all the citizens of the world. The complexity of the issues raised and the guidelines proposed by Governments (where they are) to respond to them encourage us to approach this subject in an open and vigilant manner by instigating a collective critical debate between teachers and students.

A document summarizing the organization of the semester and the content of each intervention will be provided at the beginning of the semester.

#### **ASSESSMENT**

The evaluation will not aim at a control of knowledge, but at the dual ability of the student to build a critical and reasoned point of view on the themes addressed during the semester on the one hand, and to state its implementation in his future "PFE" project. Participation in the of the debates will be valued.

Note: the effects of health conditions on teaching methods may lead to changes in the method of evaluation. This will be clarified accordingly and wisely.

Work: Reading at least one of the bibliographic references transmitted by each teacher



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Code: **M.9.9 DU901**

Teachers: A. D'ORAZIO

**ECTS credits :** 1

Number of weeks : 14

Nber of hours / semester : 22

Nber of hours / week : 1,5

Personal work : 12

## **URBANISM LAW**

### **OBJECTIVES**

This course is intended to familiarize Master's students with the conventional and regulatory framework of contemporary city production from a critical and reasoned approach to urban planning law, considered in its codified dimension as well as in its operational practice.

Specific attention will be paid to the rules and procedures aimed at land control and development strategies, as well as to the policies attached to them, whether they are led by the public actor or negotiated with the private sector.

### **CONTENT**

The proposed course is structured around 5 main sequences that are based on a contextualization and a genealogical approach of the concepts developed in order to ensure the pedagogical progression of the student and to allow a mastery of the complexity of the contents and their interactions.

- 1st sequence: The institutional and organizational framework of urban planning and development in France.
- 2nd sequence: From the right of the soil to the land strategy: regulation and control of property.
- 3rd sequence: Urban planning and development strategy: the public action in question.
- 4th sequence: Operational control and methods of intervention: what dialogue between general interest and economic interest?
- 5th sequence: Recent urban reforms in the face of contemporary challenges in urban worlds: ecological transition and participatory imperatives.

### **ORGANISATION**

This course, which is taught in full promotion, aims beyond its masterful nature to allow as much as possible participation and questioning in session. In addition to paying specific attention to the definitions and concepts of urban planning convened, it will be a question of starting from concrete situations in order to analyse and debate case studies.

This pedagogical approach aims to develop a reflexive and critical posture of professional situations and practices that students may have to know.

### **ASSESSMENT**

Written test at the end of the semester: questions related to the course