

ENSAV courses taught in English

2018-2019 academic year programme

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Cycle : Master 1

| 1st Semester | | | 2nd Semester | | |
|--|--------------------------------------|--------------------------------|---------------|---|---------------------------|
| Units of projects | | | | | |
| P45a : | Mobile Metropolis | I. Taillandier N. Armengaud | P45b : | Density & Metropolis | K. de Rycke |
| P45a : | Tokyo together | D. Leclerc | P45b : | Bangkok – Nolli 3D | S. Stacher, T. Raynaud |
| | | | P45b : | Atacama – architecture at the edge of physics | D. Bory |
| Units of master thesis | | | | | |
| UEIR1: | Tool1 - Scientific Tools of Research | A. Cornet | | | |
| UEIR2: | Tool2 - Scientific Tools of Research | N. Pham | M1 : | Energetic Metropolis | I. Taillandier |
| Units of courses | | | | | |
| C45 : | Theory of Ecology : Green Cities | G. Azar J. Boitard | C2a : | White week workshops | D. Klouche I. Avissar |
| | | | C2b : | Towards a meteorological architecture | P. Rahm |
| French lessons for exchange students per semester | | | | | |

**Workshop
Projects**
(4th/5th year)

P45a: Metropolis Invisible

(16 Ects)

(I. Taillandier, N. Armengaud)

A Thursday night, in the "Grand Paris", more than 3 million people are working. For whom? How? Where? In which space? We consider the "Grand Paris" as a territory where the invisible can be revealed. By studying, discovering, and physically practicing it, materials for projects will come up. This semester in a special format consisted of 3 stages project, aesthetic actions leading to research and back to design, students will be invited in a didactic way, to discover the invisible part of the city, the instable part of the buildings. The aim is to focus their attention on understanding the dimensions of time and scale, variable perception of the territory through mobility mode, articulations and consequently speed, slowness in planning and architecture equally. For instance, by exploring the night, students will understand the dimensions of time and scale through the prism of a precise assignment. The aim will be to propose a full-scale intervention, by taking over the night to highlight actuality and potentiality.

P45a: Tokyo together

(16 Ects)

(D. Leclerc, S. Berthier)

Following the terrible events of 2011, one of the major concerns in Japanese architectural thinking and production today is to think of space as a tool of exchange and sociability to fight against withdrawal, encourage new forms of community practice, and give meaning to the notion of place and identity within the excessive urbanity of the Japanese mega-city.

This reflection on the notions of "sharing" and "living together" will focus on a neighborhood specific to Tokyo (in 2018 we worked on the neighborhoods of Yanaka and Mikawajima).

A first phase of urban analysis makes it possible to understand the peculiarities specific to the city and the evolution of Japanese society today, to observe the multiple forms and typologies of buildings, to be interested in the voids resulting from the specific relation built between them and the street, analyzing the role of infrastructure and transportation networks, understanding the principles of resilience that have enabled the city to overcome many disasters in the past and to understand its future, to reveal the potential of abandoned places to welcome new uses.

This work is also an opportunity to imbibe the research carried out by many Japanese architects on new ways of living in the city. We will visit projects that promote community life (On Design, Naka Studio), which propose new relationships between living space and work space (SOHO), which respond to sociological changes in life in major cities. Housing production today faces new social and demographic challenges, new forms and practices such as multi-generational housing. The question of housing also requires to be familiar with the habits and customs of the art of living in Japan, from an ancient tradition that is based on subtle notions of thresholds, flexibility of space and privacy, which make it possible for this life in community.

Research
Methods
(Master thesis)

UEIR : Tool 1

(Tool 1&2: 10 Ects)

(A. Cornet)

Students will acquire skills by working on two types of objects: texts and projects. As far as the texts are concerned, several types will be introduced: scientific articles, popular articles, dissertations and theses. The main objective will be to learn the basic rules of academic writing such as the use and management of sources (eg quotes, images). Another objective will be to introduce different forms and logic of research and writing (and why it is so).

A practical application of this development could be to formalize the studies of cities of the seminar Water Cities published in books 24 + 1 and 12 ++ water cities. It is worth mentioning that by working on these works, students will have access to a contribution of knowledge on the merits - the subject of the cities of water - while questioning the form - the rules and principles of writing a published work.

For the projects, case study will be conducted. Objectives will include learning how to select cases, conducting and presenting an analysis. After an introduction on different types and tools of analysis, an architectural, urban or territorial project will have to be studied through the theme of the sustainable, ecological and resilient city, and on the subject of the relationship between territory and water (see the themes of the book 12 ++ water cities for example).

The Tool 1 course will be punctuated with presentations from the teacher - on the general rules and principles specific to academic work; examples of types and methods of analysis - and work and then student presentations.

UEIR : Tool 2 – Scientific tools of research

(N. Pham)

The academic community usually recognizes two types of research:

The scientific research and the analytical research.

Scientific fundamental research is intending to demonstrate a hypothesis considered within a disciplinary field, mathematics, physics, astronomy, biology etc.

It is lead through a selection process in order to obtain an accurate result defined beforehand and conducted accordingly to protocols that demonstrate the relevance and rigor in the selection of indicators. The purpose of analytical research on the other hand is rather to be exhaustive, opening field of knowledge and opportunities. It also proceeds on terms and indicators defined by a normative framework and references. A third research field though, philosophical, artistic, architectural still proceeds in another way, by iterations in a system that sets its aim to define its internal logic and simultaneously its own critique. The fields of architecture and urbanism borrow partly to Exact Sciences, notably for structural aspects, partly to Human Sciences for its intentions with culture and the question of use for instance. In this course we will specify and define the conditions of scientific and analytical research from within the modalities of our own architectural and urban discipline.

Master 1

First Semester : (semester 7)

Seminary Courses

(4th/5th year)

C45: Theory of ecology - Green cities

(2 Ects)

(G. Azar, J. Boitard)

The construction industry is responsible for the intensive use of energy both directly, in the creation of buildings and infrastructure, and indirectly, in the operational phase. As well as the carbon dioxide which is produced, a variety of other pollution is caused by construction processes and buildings in use.

Careful urban planning can have a major impact on reducing the environmental impact of our built environment. The course will investigate 7 topics:

- Energy;
- Water;
- Transportation;
- Social Aspects;
- Waste and Materials;
- Biodiversity;
- Labels.

The course aims more particularly at identifying the number of sustainable urban planning solutions which can provide energy and environmental benefits, as well as studying a few case studies. Results of students' investigation and research will be included in the booklet 'Green Cities'.

Master 1

Second Semester : (semester 8)

Workshop Projects

(4th/5th year)

P45b: Atacama – architecture at the edge of physics

(16 Ects)

(N. Dorval Bory)

Developing in Chile, in the Atacama Desert, the project focuses on an architectural typology perfectly constrained, particularly iconic and yet poorly documented: that of the astronomical observatory. This type of building, necessarily of a unique nature, condenses extraordinarily technical issues, extreme climatic constraints and pressure budget, resulting in both rational and unprecedented solutions. In this sense, these constructions are approached as representatives of a contemporary vernacular, allowing to place the architectural project in an undeniable scientific framework, capable of providing a renewed light on the very precise relationships between spatiality, economy, physics of materials.

The lack of architectural documentation on these subjects, and - with rare exception - the absence of architects in their design also makes it an intriguing object:

how do skills of the architect can enroll in such a program and its annexes? What architectural teachings can we learn from their study? Designed as pure tools scientists at the landscape scale, what is the place of the human being in these superstructures, and beyond, in its desert territory? It is not a question here of designing an observatory, but to analyze existing infrastructures or under construction, then to imagine their potential related programs and urban developments - no matter how small - based on the atmospheric, energetic and physical characteristics of these sites.

P45b: Bangkok – Nolli 3D

(16 Ects)

(S. Stacher,)

The city will be analyzed in its structure and historical transformation to understand the most important transfers of land ownership. This will question the current situation: What has changed? What do we need today? Social, political and historical aspects will be discussed in order to bring out questions about contemporary cities. An inquiry into collective life will be conducted in parallel: What is "collective life" today, in what places does it take place? The status of the street, the square, the shopping mall, the building (of different periods), the tower, etc. will be looked at more closely - in Paris and Bangkok. Interior and exterior public spaces, as well as "community visions" will be studied, through history (Paxton: Crystal Palace, Bruno Taut: Crystal palaces for the people, Melnikov: Workers' Club, Cedric Price: Fun Palace, ...) to ask about today's community places, in the age of social networks. The seminar will accompany the design process.

The needs of contemporary society will be surveyed in a journalistic, artistic and architectural way (interviews, films, photos, surveys, ...). Each student will present a strong document that should reveal a specific and clear approach. Project strategies will then be developed that challenge the current state, looking for potential to grant more space (subject for 2 Workshops in Bangkok and Paris).

Sites with different characteristics will be chosen. Students will look for a way to represent public spaces through drawing, in which the 3rd dimension cannot be missed (especially in Bangkok, where the public space is often below the street). The aim is to establish in the first phase a common charter to present graphically analyzes and visions of the future - a kind of Nolli plan in 3 dimensions, where spaces (potentially) public arise visually.

In a second phase, project strategies will be developed by intervening in existing structures. Each student will take a clear and specific position from which he will look at the city. Different subjects will emerge, which will be developed later. The protocol will be developed together with the students.

Master 1

Second Semester : (semester 8)

Master
Thesis
(dissertation)

M1: Energetic Metropolis

(10 Ects)

(Ingrid Taillandier)

Our aim is to prepare students to address issues such as cities resilience to expansion and resilience to flood, and to learn how to design with water and not against it.

As we know, the actual metropolises and countries under development are facing massive needs of new dwellings and new cities. China, Arabic peninsula, India, among many others are building new cities within short delay. Sometimes with high density and high-rise typology of buildings. While Europe is skeptical about this model due to some obvious failure of new cities from the 70's, other countries prefer to count on new cities rather than expanding existing ones.

This seminar will focus on 3 themes: new cities, cities on water and density.

The primary aim of the seminar is to understand how cities today are dealing with water as a resource as well as a threat, how – besides the perception of a cause of damages to prevent from – water is seen as a natural element to preserve and as a tool to deploy in urban design and planning.

Along this knowledge acquisition on the theme of water in cities, two fundamental dimensions of research will be approached in the seminar: theory and analysis. Two questions will be investigated in particular:

- how can we compare theoretical backgrounds, data, urban design of cities (historical ones, utopian ones as well as contemporary ones)?
- which methodology of analysis can we apply to such different cases, different contexts and diverse populations?

Based on the 1st semester analysis works and research tools and, students will have to rely on theory principles to develop their own subjects for their master thesis on the topic of ecological urbanism.

Master 1

Second Semester : (semester 8)

Seminary Courses

(4th & 5th year)

C2a: White Week Studios (in French and English)

(2 Ects)

The white week will start from **February 18th to 22th, 2019**

The theme: **Acceleration - Deceleration**

a - conferences are organized every morning from Monday to Thursday of the week. Several lecturers, architects, urban planners, historians, philosophers are invited.

b - **three studios** of concomitant projects will be conducted during the afternoons, with a cross presentation on Friday afternoon.

1- Commandments of the Plan and Ecology of Disorder (Ido Avissar , Djamel Klouche)

Acceleration / Deceleration

Combining the Plan Commandments and an Ecology of Disorder would be the goal of exercises. The objective of the studio is to propose urban or architectural situations, built on a scenario, putting into space perspective, this double strategy of conjugating the purpose of the PLAN as a tool for controlling a climate and the potentiality of the DISORDER as a waiting horizon for our contemporary societies. The report will consist of three A4 documents:

- a clear and concise text expressing the chosen scenario and the spatial strategy
- a black and white plan
- a photo of a mock-up illustrating the product space.

2- COMMUNITAS: the new alien domestic landscape (Julia Tournaire, Gaétan Brunet)

Acceleration / Deceleration

Phase 1 - ATLAS

At first, the exercise will allow thanks to the realization of an atlas, to produce a common knowledge about the notion of community. This critical collection work will take the form of a series of drawing plan. Beyond the exercise of representation, which will be the opportunity to clarify, possibly compare different types of community, students will study the theoretical springs, philosophy or political thought at work behind the spatial forms of these social microenvironments. This work will be the subject of a presentation between the students, provided from the research carried out individually or in pairs a collective knowledge.

Phase 2 - PROJECT

The second part of the week will be dedicated to the production of projects by the students. They will question in this production, definitive contemporary places of community life which indiscriminately targeted the work and leisure, hacker

communities, incubation camps and startups base camp, self-sufficient post-capitalist villages, retirement homes 2.0, XXL Airbnb and residential habitat ...

Phase 3 - REPORTING

The report will take the form of:

1 - a drawing representing a historical or contemporary reference and a conceptual text,
2 - one or more documents (mock-up photography, 3D image, model, organization chart) to represent the proposal of a community imagined by the students.

3- The eye of the territory, constitution of an Atlas of the planetary phenomenon of urbanization (Jeremy Lecomte)

Acceleration / Deceleration

The rural exodus of developing countries is sometimes referred to as the last phase of an urbanization process that began nearly two centuries ago. Fifty-four per cent of the world's population now lives in cities. Sixty-six in the next thirty years. This vision, informed by an outdated theoretical model, seems to ignore an obvious reality: the city is now everywhere. Rather than talking about the migration of the inhabitants from the countryside to the city, it seems that it is more necessary to speak of a reverse movement of extension of the city itself towards the countryside.

C2b: Towards a meteorological architecture

(2 Ects)

(P. Rahm, J. Boitard)

PART I - Building Physics and Environmental Design (J. Boitard)

The construction industry is responsible for the intensive use of energy both directly, in the creation of buildings and infrastructure, and indirectly, in the operational phase. As well as the carbon dioxide which is produced, a variety of other pollution is caused by construction processes and buildings in use.

Thoughtful planning and design can have a major impact on reducing energy use and pollution over a building's entire lifetime, especially when considered at the early stages of the design process

This course consists in teaching the basics in building physics and environmental design. It aims more particularly in identifying the number of sustainable solutions which can provide environmental benefits as well as financial savings.

Part II – Constructive thinking and contemporary architecture (P.Rahm)

Climate change is forcing us to rethink architecture radically, to shift our focus away from a purely visual and functional approach towards one that is more sensitive, more attentive to the invisible, climate-related aspects of space. Slipping from the solid to the void, from the visible to the invisible, from metric composition to thermal composition, architecture as meteorology opens up additional, more sensual, more variable dimensions in which limits fade away and solids evaporate.

The task is no longer to build images and functions but to open up climates and interpretations. At the large scale, meteorological architecture explores the atmospheric and poetic potential of new construction techniques for ventilation, heating, dual-flow air renewal and insulation. At the microscopic level, it plumbs novel domains of perception through skin contact, smell and hormones. Between the infinitely small of the physiological and the infinitely vast of the meteorological, architecture must build sensual exchanges between body and space, and invent new aesthetical approaches capable of making long-term changes to the form and the way we will inhabit buildings tomorrow.