

**Type of Course:** Advanced Studio ARCH 85101 / 51000  
**Class Meetings:** M/T/TH: 3:00PM – 7:10PM  
**Instructor:** Professor Ana Penalba  
**Location:** Room TBD  
**Semester/Year:** Summer 2018

# TECHNO-FUTURES

## **An investigation on how the current status of our socio-technologization is challenging the program and form of Architecture**



*"Culture, science, and technology, although distinct on specific levels, have been and continue to be inextricably bound to one another in such a fashion that each actually merges into the other, laying lines of contact and support. These relations involve a kind of complexity which prohibits us from claiming that any one of the three is distinctly prior, primary, or fundamental to one of the others. Various kinds of relations ensue (and are possible): technology shapes culture; science epistemologically grounds technology; science as an epistemology presupposes the technological; (techno)culture produces (techno)science; culture is always technological but not always scientific, and so on. Furthermore, science often legitimates one cultural practice over another as in the normative approach to physiology in which science distinguishes/legitimates what is "natural" and prescribes corrective therapy for what it deems "unnatural".*

*"Techno science and cyber culture"*

Our societies are in constant evolution and their urban environment is completely different to what it ever was before. The rules of how the world works are being radically transformed by the new dynamics of social interaction enabled by the latest technologies that give voice to individuals. It urges to ask ourselves which are the current and upcoming issues that affect our societies and think how we are going to tackle them. In this studio we will look forward into what is about to come. We will work as a Think-Lab team, analyzing the way we live now and how we imagine the future. Students will formulate their position, they will decide what they want to do and will go for it!.

We will focus on investigating how technologies are challenging the field of Architecture not just in terms of its digitalization but in how these sociological, cultural, political, environmental, etc changes are affecting the way we produce and practice Architecture. We will examine current design formats and architectural programs that need to be updated and even invented to host the new social demands stimulated from our contemporary and future technological revolutions. How the current and upcoming technologies are affecting the social realm of our cities and how these new behavioral patterns will affect the practice of a 21st century Architect?, which will be the new Architectures able to accommodate these new cultural and behavioral needs of a very technified society? and, how these upcoming social demands will affect to our urban contests?.

We will use the city of New York to contextualize our architectural "visions" and thoughts. Together, we will produce an inventory of forthcoming Architectural opportunities and a collaboratively urban plan of the future of New York City. Students can go as far or as close in time as they need to make their points. The goal is not to bring acclaimed solutions to specific problems, but most over to speculate and think about the many Architectural challenges that our future is making available.

## The Research Topics / TECHNO-SOCIAL REVOLUTIONS

### TOPIC 01 / Tuesday June 12th / THE SELF: OUR TECHNO-BODIES

The relationship of our bodies with the digital is still a new and unknown status of being. Technologies are supposed to improve the way our body function and experience the world. They are capable of modifying our physical appearance as well as other intangible qualities that define our personalities and character. We can now design ourselves more than ever and, in many cases, the relationship between what we are and what we have designed is that vague that forces us to re-question what is real and what is not. Should Architecture be ready to host more than one reality and how does the disconnection from our very direct physical sphere affects our Architecture and cities?

**Architectural Typologies for revision:** Hospitals / Yoga Centers / Meditation Spaces / Natural Scenarios / Spaces for Socialization (Clubs and Restaurants) / Self-sufficient Cities and Communities / Theme Parks and Recreational Spaces / Fictional Architecture / Learning Spaces and Collective Production Amenities

**Reading Reference:** *"The eyes of the skin"* by Juhani Pallasmaa

*"Are we human?"* The Unstable Body & Designing the body, by Beatriz Colomina & Mark Wigley

*"The Fun Palace"* by Cedric Price

#### Individual Research topics

MENTAL HEALTH CARE FOR THE SELF / THE TECHNOLOGIES OF THE LEISURE TIME / "SELF"-SUFFICIENCY / NEW FORMS OF TECHNO-SOCIALIZATION / THE CONSTRUCTION OF OUR "SELF" IDENTITIES

### TOPIC 02 / Tuesday June 19th / THE MASS: SOCIAL MEDIA AND THE POWER OF THE CROWD

Public opinion is a new source of power in the way society takes decisions. The citizen of today is not a passive user and its participation as an active collective agent is transforming the ways in which design is understood. The "crowd-funding" is enabling a new creative economy that encourages and supports individual entrepreneurship. "Crowd-sourcing" is transforming the organization of working groups and, the platform of "crowd-editing", for example Wikipedia, is democratizing knowledge. How is this fact shaping the geography of our cities and which are the new Architectural demands to host this power?

**Architectural Typologies for revision:** Centers for citizen votes / Parliaments and other Political institutions / Educational spaces for citizens / Community Centers / United Nations Headquarters / Co-working spaces and spaces for collaborative production / Cooperatives / Plazas / Public space and spaces for protests and big assemblies / Newspaper buildings / TV Studios / Airports and transportation stations / Car and other vehicles systems such as Uber

**Reading Reference:** *"Understanding new Power"* by Jeremy Heimans and Henry Timms.

*"The right to the city"* by David Harvey

*"The Pro-Am Revolution"* by Charles Leadbeater & Paul Miller

#### Individual Research topics

DEMOCRATIC CITIES / SHARING ECONOMY / SOCIAL MEDIA AS A TOOL TO ASSEMBLY-ORGANIZE THE MASS / THE COLLECTIVIZATION OF INFORMATION AND THE MEDIA / NEW TRANSPORTATION MODES

**TOPIC 03 / Tuesday June 26th / THE KNOWLEDGE: TOWARDS A VERY VERY SAVY CITY**

Cities are "smart" and are getting smarter. All around collect, store and processes information about us. The technologization of Knowledge is affecting to our way of approaching the cities and this virtual status -completely detached from their geographical contest-, is challenging the veracity of design and of our reality. Does this hiper-stimulated process of learning make us to know more about our cities or to learn less about what they really are? and, how the emergence of Location-based Services is affecting to our way of "sensing the city" and the form of our urban environments?

**Architectural Typologies for revision:** Shopping Malls and consumption patterns (Amazon) / Supermarkets / Housing and Residential Typologies / Educational complex and learning spaces / Community Centers / Industries for production of goods / Film and books libraries / Museums and other cultural spaces

**Reading Reference:** *"Towards an informational city"* by Saskia Sashen

*"Toward the sentient city"*, by Mark Shepard

*"The Expendable Reader"*, Telefutures-Propective Observations & Technologies in homes

**Individual Research topics**

ROBOTIZATIONS & SMART ARCHITECTURE / NEW CONSUMPTION PATTERNS AND PRODUCTIVE SYSTEMS / COPY LEFT KNOWLEDGE AND DO IT YOURSELF / THE POST-TRUTH / COPY AND PASTE INFORMATIONAL PRODUCTION

**TOPIC 04 / Tuesday July 03rd / THE ENVIRONMENT: THE TECHNOLOGIZING OF OUR NATURAL SOURCES**

Technologies are changing our relationship with the environment as we know it and, our very urbanized territories are moving us away from a direct relationship with the wild places. It looks like as if the destruction of nature is directly related to the growth of technology. Technologies are stating an attitude from which we are growing in fear to the uncontrolled and the wild. We are becoming increasingly alienated, assuming digital platforms as substitute for the engagement with the nature. This fictional relationship is comprising our capacity to adapt and live within unpredictable environments. What is the role of Architecture mediating the relationship between our environment and the technology?

**Reading Reference:** *"Techno Science and Cyber Culture"* Chapter V.Bioethics.

*"Are we human?"* The Design of Health, by Beatriz Colomina & Mark Wigley

**Architectural Typologies for revision:** Retirement Homes and Communities / Farms, Crop fields, Community Gardens, Hydroponic gardening / Virtual systems such as video games and Pokemon-go / Energy industries / Artificial cities and environments

**Individual Research topics**

LONGEVITY AND GENETIC SERVICES / FOOD PRODUCTION / WASTE, WATER & ENERGY PRODUCTION / THE DESIGN OF ENVIRONMENTAL CONDITIONS / LOCATIVE MEDIA

\*Please, feel free to propose other topic that is not listed in the syllabus that you think is relevant and you'd like to investigate.

**Work Methodology**

*"What is a vision?"*

*A vision is, in a way, what happens between a question mark and a proposal. It asks the big questions and then paints an image for the future with its answer. Most importantly, it is a dream for the city and for its spatial translation that offers a long-term, cohesive, seductive, and strong perspective for future societies. It is part curiosity, part exploration, part fantasy, and part real problem solving. The role of the visionary is to guide, and direct and summarize the course for this increasingly urban world."*

Afterword by Winy Maas "Visionary Cities" T?F

This course will be an active platform for discussions, individual research, and collective Production.

**Individual Project: NYC 2068 ARCHITECTURAL OPPORTUNITIES**

Each student will design, update or even dismantle a building that respond to the demand of a specific social phenomenology derived from a technological revolution listed above. They will select a site/building/space/condition from New York City where to contextualize their research.

The structure of thinking and work will be the following:

- 1) Analysis of your selected research topic / The social demands
- 2) Research about its causes / The technological revolutions associated to those demands
- 3) Envisioning its potential / The production of arguments
- 4) How will it affect to our current Architecture? / Design a building
- 5) How will it affect to our cities? / Produce an Architectural system that represents NYC 2068

### **Deliverables**

We will work in the production of "evolving drawings". This means that instead of producing the "final" architectural documents of the projects at the very end of the studio, we will produce this material from the very beginning of the semester. We will work in one single axonometric drawing that will be updated every two weeks with the information originated from the investigations of (4) 36x36 inches drawings - (1) collage, (1) plan, (1) elevation/section and (1) render-. Additionally, each student will produce a 11x11 inches process booklet to archive the failed and successful work process of their projects.

- \* Each student will choose the axonometric type that better represent their ideas.
- \* All axonometric drawings presented along the semester will be 36x36 except for the final review which will be 48x48 inches.
- \* Students are allowed to print all drawings in tiles of 11x17 except for the Final Review; by then (4) 36x36 final drawings must be printed in one single piece and (1) 48x48 axonometric drawing in two 24x48 pieces.

### **Assignment I.01 / Tuesday June 05th: ARGUMENTS / STUDIO BRAIN STORM**

- 1) Students will brain storm about their assigned research topics and will build arguments on how the exposure of their research facts will affect our current Architecture and cities.
  - 2) Each student will bring ideas for specific architectural opportunities related to their research topics.
  - 3) Each student will bring a blank 36x36 inches paper to start working in Assignment 03, the collages.
- \* At this stage every student must start working on their research booklets. Each student will bring at least (3) 11x11 drawings to visualize their thoughts.

### **Assignment I.02 / Monday June 11th: EXISTING CASES ANALYSIS (Collage) / STUDIO PIN-UP**

- 1) Each student will produce a 36x36 COLLAGE drawing that will be the base with which students will define a scale, choose their site and determine the Architectural typology to research on their selected topic. This collage should be made with images from existing building/spaces that belong to the architectural typology of their investigation, as well as with other elements/projects that belong to other architectural typologies but deal somehow with their research topic.
- 2) Research booklet updates.

\* By this time students should present the selected site/condition and the program idea for their projects.

### **Assignment I.03 / Thursday June 14th: THE PROGRAM (Plan) / INDIVIDUAL DESK-CRIT**

A 36x36 PLAN drawing that shows the spatial condition and the program for their projects. Students should test their cases in a specific site within the city of New York.

\*By this day all students must have a 36x36 Axonometric Draft showing the type of axonometric selected and drawing proportions.

### **Assignment I.04 / Thursday June 21st / REVIEW 01**

- 1) Updated 36x36 PLAN drawing.
- 2) 36x36 Axonometric Drawing that contains the information concluded with the production of their plans.
- 3) Research booklet updates.

### **Assignment I.05 / Thursday June 28th: THE SYSTEM (Section / Elevation) / INDIVIDUAL DESK-CRIT**

A 36x36 SECTION/ELEVATION drawing that shows the architectural systems that conform their proposal (structure, construction, program network, occupancy, etc).

### **Assignment I.06 / Thursday July 05st / REVIEW 02**

- 1) Updated 36x36 SECTION/ELEVATION drawing.
- 2) Updated 36x36 Axonometric Drawing that contains the information concluded with the production of their Section/Elevation.
- 3) Research booklet updates.

### **Assignment I.07 / Thursday July 12th: THE MATERIALITY (Render/Model) / INDIVIDUAL DESK-CRIT**

A 36x36 RENDER drawing that shows the materiality and spatial design of their projects. This drawing could be produced with pictures of existing elements, pictures of a physical model and/or computer renders.

**Assignment I.08 / Monday July 23th: FINAL REVIEW**

For the Final Review, students will present all the documents presented during previous reviews:

- 1) Four (4) 36x36 Updated Drawings (Collage, Plan, Section/Elevation, Render)
- 2) One (1) 48x48 Final updated axonometric drawing
- 3) One (1) 11x11 process booklet.

\*The date for the final review is still TBC

**\* Additionally we will produce a collective inventory booklet with the proposals from all the students. To do so each student will submit an essay about their proposals of around 300 words and a jpg of their most updated axonometric drawing by Thursday July 19th.**

**Collective Project: NYC 2068 URBAN VISIONS**

In parallel to the individual projects, we will work collaboratively in the production of a speculative plan for Manhattan 2068 envisioning some of the urban consequences of the technologization of our societies. Each student will produce one cartography layer of the city based on and related to their research topic. By the end of the course we will overlap all the layers produced by each student to collectively re-create our NYC studio urban vision. Every Tuesday we will hold in the studio a series of five "NYC 2068 Urban Conventions" where students will make presentations of how their selected research topics would affect to our cities in general and to the island of Manhattan specifically.

**Deliverables**

There is a total of seven Tuesdays for the production of this assignment. The first Tuesday will be dedicated to brain storm about all the Research topics. The following four Tuesdays are reserved for presentations, on the next Tuesday we will discuss the final drawing with all the layers together and, the final Tuesday of the semester will be dedicated to produce and review the physical model.

**Assignment C.01 / Tuesday June 05th: ARGUMENTS / STUDIO BRAIN STORM**

- 1) Reading Discussion "*New Babylon*" by Constant
- 2) Students will brain storm about their assigned research topics and will build arguments on how the exposure of their research facts will affect our current Architecture and cities.

\*At this stage every student must start working on their research booklets. Each student will bring three (3) 11"x11" drawings to visualize their thoughts.

**Assignment C.02 / Tuesday June 12th, 19th, 26th and July 03rd / NYC 2016 URBAN CONVENTIONS****C.02.1. Studio Reading Discussion****C.02.2. Each student will present their urban research in the assigned date listed below.**

- 01) Argument material to support their research topic analysis and their conclusions about how it will affect to the city of NY.
- 02) Presentation of specific cases and evidences, showing how their technological challenge is already affecting to the cities.
- 03) Production of one cartography showing how their research topic will affect to their assigned urban network.

Drawing size must be 24x40 inches at a scale of 1"=800' (follow Professor's Drawing template)

**C.02.3. Following Sunday night Submission**

- 01) Updated cartography based on the feedback received from their presentations.
- 02) Essay of their urban network based on our collective discussion.

**Assignment C.03 / Monday July 23th: FINAL REVIEW**

- 01) Each student will produce a physical model that corresponds to their urban layer.

Model size must be 24x40 inches (scale 1"=800')

- 02) All together we will present the overlapped drawing of all the layers produced by the students.

Final Drawing size 36x60 inches (scale 1"=500')

\*03) If time, each student will produce a 10-20 seconds video of their urban layer to show all videos together in the F.Review.

**Objectives**

This course is designed to give students the intellectual tools to learn to think critically and innovatively. The methodology of the semester will push the boundaries between design and research, working simultaneously in both aspects. The sharing of knowledge through discussion is one of the most functional and productive ways to keep ideas flowing. "Ideas" are "things" that cook slowly through the overlap of many thoughts, the accumulation of information, and the freedom of re-questioning everything. Encouragement of a teamwork attitude, exploring work methodologies for collective production, design formalization of thinking through drawings and models, developing a peripheral vision that includes crossovers with other disciplines and, addressing a collective critical thinking about the future of our cities will be the main issues of this studio.

**Schedule**

**SCHEDULE:** Note: the schedule below is subject to change through the duration of the semester.

**Week 01**

Mon 06.04 First day of class (General presentation)  
Tue 06.05 Assignment I.01 + Assignment C.01 / STUDIO BRAIN STORM  
Beginning of 36x36 Collage  
Thu 06.07 Studio

**Week 02**

Mon 06.11 Assignment I.02: STUDIO PIN-UP  
Tue 06.12 Assignment C.02 / NYC 2068 Urban Convention: "THE SELF"  
Thu 06.14 Assignment I.03: INDIVIDUAL DESK-CRIT / PIN-UP

**Week 03**

Mon 06.18 Studio  
Tue 06.19 Assignment C.02 / NYC 2068 Urban Convention: "THE MASS"  
Thu 06.21 Assignment I.04: REVIEW

**Week 04**

Mon 06.25 Studio  
Tue 06.26 Assignment C.02 / NYC 2068 Urban Convention: "THE CITY"  
Thu 06.28 Assignment I.05: INDIVIDUAL DESK-CRIT / PIN-UP

**Week 05**

Mon 07.02 Studio  
Tue 07.03 Assignment C.02 / NYC 2068 Urban Convention: "THE ENVIRONMENT"  
Thu 07.05 Assignment I.06: REVIEW

**Week 05**

Mon 07.09 Studio  
Tue 07.10 NYC 2068 Urban Convention Group Pin-Up  
Thu 07.12 Assignment I.07: INDIVIDUAL DESK-CRIT / PIN-UP

**Week 06**

Mon 07.16 Studio  
Tue 07.17 Studio  
Thu 07.19 Studio

**Week 07**

Mon 07.23 Assignment I.08 + Assignment C.03: FINAL REVIEW (to be confirmed)  
Tue 07.24 Studio