

University of Florence

School of Architecture

ICAD – INTERNATIONAL COURSE ON ARCHITECTURAL DESIGN
ARCHITECTURE AND ENVIRONMENT LAB

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ARCHITECTURAL DESIGN III

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Educational objectives

In light of the now widespread awareness that design requires complete appreciation and understanding of the meaning of "environmental sustainability," and the universal acceptance of the concept of "sustainability" — as seen first in the Shanghai Expo in 2010, called "Better cities, better life," and then with the Milan Expo (May 2015), "Feeding the Planet, Energy for Life" — the course has the primary objective of exploring this issue, delving into important developments in this area in the contemporary scene.

Buildings must be built with consideration for the environment in which they will be set and responding to the specific social needs that currently pertain first and foremost to the habitat, energy consumption and the emissions the buildings produce. This is clearly not a passing trend but a need in response to a genuine environmental emergency requiring all countries to drastically reduce greenhouse gases, a third of which are produced by human activities connected to housing.

The belief has finally become widespread, in building and architecture as well, that every human action has an effect on the community. Activities related to "building" must, therefore, take on specific responsibilities that require everyone involved to carefully adhere to these criteria, methods, and products that let us work consciously in harmony and with respect for the environment.

The course is highly multidisciplinary, bringing into relationship different realms such as architectural, environmental and landscape design, history and restoration of historical centers, energy analysis, assessment of economic and environmental impact, innovative technologies, building technologies, and new materials, as well as new building techniques.

The Lab is organized with an "on the job" approach to make it dynamic and engaging; classroom lectures are limited in favor of seminars and application exercises. Within the span of a semester, most educational activities will be in the classroom and focused on devising and developing the final project.

Design theme:

Development of a building to be used as library and multipurpose structure

The goal of the Architecture and Environment Lab's design exercise is to guide students in developing design ideas for the New Castel Maggiore public Library, in the surroundings of Bologna.

According to the guide lines included in the bid of the competition promoted by the Municipality of Castel Maggiore, the students who will follow the course will be asked to design a new building that will be aimed to be used as a library and that will also include the Municipality Council Chamber and multipurpose halls, in order to become a highly representative building that will be able to transmit culture in all its forms, capable of matching the needs of information and general consultation; a connecting tool between needs of the daily life, of the information society and of the transmitting, trying to create a cultural service capable of intercepting not only the needs of study and information of the urban users, but that has to become a point of reference for all Citizens and that may be proposed as a place where it is pleasing to go to the current library and finding entertainment."

During the lab, students will have the chance to take on the challenge of a real competition, and they will be asked to respond to its planning requirements, respecting deadlines and following the guidelines to best design flexible spaces, capable to create interaction between outdoor and indoor by "projecting the building in the several visions, social as well as cultural."

The building must host a library of about 700 sqm. conceived according to the concept of *open library*, the room for design activities and exhibitions will be of 200 mq. with independent access, but connected to the library. There will also be a Council Room of 130 sqm. and a multipurpose space of 130 sqm. to hold up to 100 people with outstanding acoustic requirements. Two rooms of about 30 sqm. are expected to be design and each one with direct access from the outside.

Program:

The course's duration is an academic semester for a total of 144 hours (48+48+48), for which enrolled students receive 18 (6+6+6) academic credits.

All the course's activities require participation and students must have 80% attendance in order to be eligible for the mid-semester evaluations and the final exam.

1st STEP / Introduction to the Workshop's theme

Introduction to the design theme, explanation of the ideas' competition and enrollment of students in the Lab.

Organize work groups, each of which will consist of 2 or (at most) 3 students.

Organize work to build a general model of the project area, to be done as a group in the classroom by students enrolled in the Lab.

2nd STEP / Building type analysis

Delivery of building type analysis, focused on the history of the school/educational building since its origins, through an in-depth consideration of case studies in which students will identify important moments in historical and contemporary buildings in Italy and the world.

The analysis will be delivered with a full presentation, supported by projected images, which each work group will give in the classroom for the teachers and other students.

> Weekly meeting with teachers to review work progress.

3rd STEP / Context analysis

Delivery of historical, landscape, urban planning, and sociological analysis of project area for an in-depth study of the context where the new school complex is to be located; on a regional level, on a municipal level about Follonica, and with a specific study of the area in which the project is set.

The analysis will be delivered with a full presentation, supported by projected images, which each work group will give in the classroom for the teachers and other students.

> Weekly meeting with teachers to review work progress.

4th STEP / Master plan

Each work group will develop a master plan; the design of an architectural structure requires a prior general design and/or redevelopment of the project area within which the school complex is set. Particular focus will be given to designing outside landscaped areas and the system of roads and entrances to the new complex.

> Weekly meeting with teachers to review work progress.

> Delivery of the master plan, preparing two A0 charts that each work group will present to the teachers and other students in a classroom projection.

5th STEP / Concept Design and Final Design

Development of architectural structure by each work group in all scales needed for the project, following the design steps of the Concept Design and then the Final Design.

> Weekly reviews with teachers of work progress, with special focus on architectural quality and integration of energy, building system, structural, and technological aspects in the design.

> Delivery of the master plan, preparing two A0 charts that each work group will present to the teachers and other students in a classroom projection.

6th STEP / Final exam — Presentation of competition materials and awards

Delivery of materials required by the Lab competition; final graphic representation of the design, summarizing all design steps with complete architectural drawings at the various scales needed to clarify the proposal: historical / urban context analysis, master plan at 1:1000 scale, design concept and general site plans at 1:500 scale, functional diagrams, distributional layout, floor plans, elevations, sections at 1:200 scale with close-up points at scale 1:100, construction details at 1:50, materials overview, views and photo montages, model.

The competition specifically requests:

- N. 10 boards in A0 format
- model to 1:500 scale (to be included in the general model)
- model in a 1:200 architectural scale
- illustrated report in A4 format of at least 20 pages including the cover
- CD with charts in PDF format, and the report in PDF format

The jury is made up of the Lab's head teachers and possible outside figures. After it has completed deliberation, the winning, second and third place designs will be chosen, as well as several honorable mentions, and each student will receive an evaluation as the results of the final examination.

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