Dipartimento Ingegneria e Architettura

Storia delle Tecniche Architettoniche
History of Building Construction

Key words: Storia, Architettura Tecnica
History Architecture Technique

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History and development of Building Construction

«Architectural history has been widely studied but the history of building construction is only just beginning to be explored. Building technologies have tended to vary widely from place to place and methods of technology transfer from one culture to another are often unclear. Moreover building technology is often overlooked. The study of the history of building construction involves the use of documents to understand the social background and economics of the building process.»

«Architectural history has traditionally looked at finished buildings. It has given less attention to the methods used to construct them. Studies in the history of building construction look at the methods used to construct buildings in the past and the way these affect the building form. They typically work from a combination of archaeological surveys and in-depth archival research. The history of building construction includes (but is not limited to) the study of building regulations; building structures and the history of the understanding of building structures and structural mechanics; book and publishing on building construction; contracts and building accounts; supply and use of materials; the economics of building contracting; the development of construction firms; guilds and craftsmen; and the influence between countries of different building techniques and methods of procurement.»

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- The course is divided into two stages: The first one follows a **historical path** starting from ancient architecture (Greek and Roman) to the 20th century, thus following the "red thread" that marks **the evolution of reinforced concrete**. The second stage focuses on the **debate on the innovation of building techniques within the Modern Movement** related to the European context of "pioneers" such as Le Corbusier, Mies Van der Rohe and joined by Frank Lloyd Wright.



Syllabus of the course

From Roman architecture to the 18th century innovations: "opus caementicium" and concrete.
Pantheon and other Roman buildings.
Saint Sophia as evolution of dome construction methods. Wood and iron in Roman architecture.
The development of modern concrete and the invention of reinforced concrete: the pioneers.
A case history: the experimental use of reinforced concrete in Trieste Port.
The Monier system and its application in Central European architecture.
The concrete takes form: the invention of a language for 20th century architecture.
Frank Lloyd Wright and the Concrete Block, the "gutter rat" of architecture.
Continuity and Plasticity form Fallingwater to the Guggenheim Museum in NY.
Frank O. Gehry "Sketches" by Sidney Pollack.
Le Corbusier and the "Five Points of Architecture": Maison Dom-Ino, Citrohan and Villa Savoye.
Ludwig Mies van der Rohe, "Less is more" and the "Chicago Frame".
The Seagram in NY and the curtain wall.
"How much does your building weigh, Mr. Foster?".

The Course activity

Frontal Lessons in the class
Exercises Cooperative learning
Listening and Reading Comprehension
Videolessons
Visit to the city: the Port, a construction site
Written assignments to evaluate the linguistic competences
Project work