

Synthetic description and specific course objectives

Architectural Restoration is a complex subject, which gathers together founding theoretical issues and high-tech aspects. Therefore, the Course of Architectural Restoration includes two subjects, Theories of restoration and architectural restoration, which have the purpose of providing the basic elements to understand the main theories of restoration over the centuries and, at the same time, the critical and technical tools for the elaboration of a project of conservation. On the one hand, the theoretical basics of restoration are taught, on the other hand, students learn a method for historic building conservation.

Course entry requirements

Students have to have knowledge of History of architecture in its diachronic development from classical to modern (students are required to have passed the exam of History of Modern Architecture), technique of measurement and drawing of historic buildings, traditional building materials

Course programme

The course is organized in lectures, seminars and practical work to verify the evolution of the project which the professor assigns to each group of students; the course, in fact, includes a practical part which consists of the elaboration of a project of conservation, consolidation and re-use of a historic building.

Program of Theory of restoration

Etymologies and meanings of the terms "restoration", "restore", "conservation", "maintenance", "recovery", "protection". Concepts of "monument", "heritage" and "cultural heritage".

The neo-classical period and archaeological restoration.

The issue of "protection" before the Unification of Italy. The organization for the protection of historic buildings in France. Quatremère de Quincy. "Stylistic restorations". France and Italy. E. E. Viollet le Duc.

The anti-restoration movement John Ruskin. W. Morris and S.P.A.B. The "philological restoration". C. Boito. The "historic restoration". L. Beltrami. The question of values. Alois Riegl and Max Dvorak.

Gustavo Giovannoni and the "scientific restoration". The Conference of Athens. Restoration between the two wars. The "critical restoration" theory.

R. Bonelli and R. Pane. The Charter of Venice (1964). The theory of Cesare Brandi and the Charter of 1972. "Pure" Conservation. Practical manuals for restoration.

The study of some significant interventions of restoration is proposed in order to verify the relationship between history, restoration and architecture.

Program of Architectural Restoration:

The study of constructive and maintenance techniques, of the different ways of use of the building, the analytic investigation of these transformations over time (from the

supposed original building to the last restoration), the consequent awareness of the complexity of the historic building (which is its major value) and of the processes of structural and material degradation which have affected it, are necessary elements for a correct approach to a compatible project of conservation and re-use.

Lectures are organized according to the following topics:

A. ANALYSES OF HISTORIC BUILDING AND ITS STRATIFICATIONS: historic research (in archives, bibliography, iconography), measurement, photographic survey, the stratigraphic analyses;

B. ANALYSES OF DEGRADATION: recording, interpretation, study of measures to resolve or reduce degradation;

C. STUDY FOR COMPATIBLE RE-USE, experiences.

Themes for practical work

Practice deals with the study of a historical building, through historic and archival documentation and measurement. This first phase is followed by the recording of building material degradation and structural damage, and the study of the measures for conservation (for this second phase, it is sufficient to define the kind of damage and the outline of the main technical measures for control of intervention); the project of re-use, with the definition of the technological adaptations, concludes the practice.

The main theme of the subject is the conservation of historic buildings. The aim of the course is to give the student a scientific method for conservation of historic buildings. We start with an attentive research on the history of the building and scrupulous surveys and measurements, studying structural techniques and building materials, but also degradation and stress in relation to the historic transformation of the building itself. This intimate knowledge of the building governs and justifies interventions for conservation, and a compatible re-use of the building. Particular attention is given to historic building accessibility, also in relation to the national law for architectural features barring advance to the handicapped. This aspect, in fact, is considered an important part of the project of re-use.

Student's independent work

During the course, students elaborate a project which deals with the conservation of a historic building selected in agreement with the professor. The different phases of the project are verified by the professor during the hours dedicated to practical work.

Testing and exams

Students' learning is tested through a completed project, and is a basic requisite for admission to the final exam. During the course, students are also tested through

continual assessment (multiple-choice, short essays). The final exam is based both on topics studied during the lessons and the bibliography specified in the program. For project work the students can present in groups, but the final exam is individual. Starting from theoretical aspects, through to technological questions, the exam covers all phases of the project.

Suggested reading materials

- A. BELLINI (a cura di), *Tecniche della conservazione*, Franco Angeli editore, Milano 1986
- A. BRUSCHI, *Introduzione alla storia dell'architettura. Considerazioni sul metodo e sulla storia degli studi*, Milano 2009
- G. CARBONARA (a cura di), *Trattato di restauro architettonico*, Utet, Torino 1996, Voll. I-IV; Voll. V-VII (Impianti); Voll. IX-XI (ed aggiornamenti)
- D. FIORANI, *Restauro architettonico e strumento informatico. Guida agli elaborati grafici*, Napoli 2004
- B.P. TORSELLO, S.F. MUSSO (a cura di), *Tecniche di restauro*, Vol. I-II, Utet, Torino 2003
- B.P. TORSELLO, *Che cos'è il restauro? Nove studiosi a confronto*, Marsilio, Venezia 2005
- MUSSO 2013 - S.F. MUSSO (a cura di), *Tecniche di restauro. Aggiornamento*, Utet, Torino 2013.
- S. F. MUSSO (a cura di), *Recupero e restauro degli edifici storici. Guida pratica al rilievo e alla diagnostica*, II edizione, EPC libri, Roma 2016⁴
- M.P. SETTE, *Il restauro in architettura. Quadro storico. Saggio introduttivo di Gaetano Miarelli Mariani*, Torino 2001
- S. VALTIERI (a cura di), *Vademecum per il progetto di restauro dell'architettura*, GB Editoria, Roma 2007

Useful references include:

Journals "TeMa" (Tempo, Materia, Architettura), "ANATIKH" (Cultura, storia e tecniche della conservazione), "Arkos", "Casabella", "Archistor" (www.archistor.unirc.it).

Other references and resources are given during the lectures.