



BEST

PRACTICES HANDBOOK

„Contemporary realities and needs
of sustainable urban rehabilitation”

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Contemporary Realities and Needs of Sustainable Urban Rehabilitation



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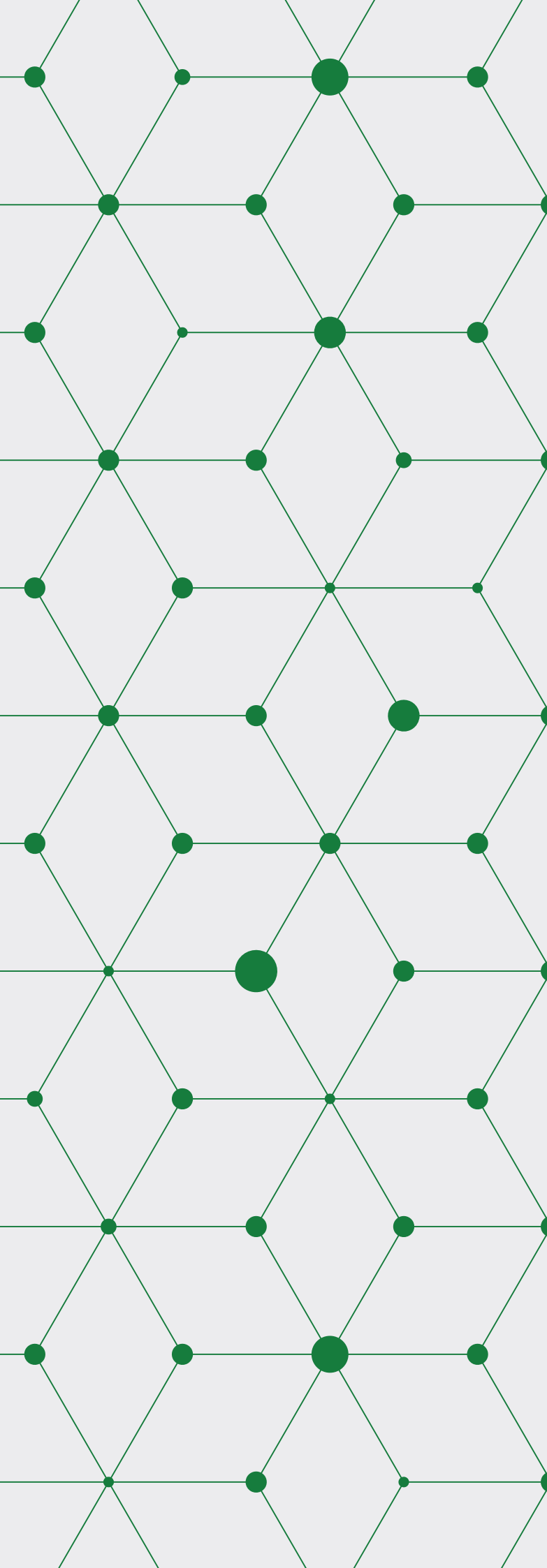
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THE TEACHING OF THE HERITAGE PROTECTION AND REVITALIZATION OF HISTORICAL CITIES AT THE FACULTIES OF ARCHITECTURE /IN THE FIELD OF ARCHITECTURE/ IN ITALY

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INTRODUCTION

/INFORMATION ON THE AIM, SCOPE AND STRUCTURE OF THE REPORT; CHARACTERISTICS OF THE PARTICIPANTS COMPLETING THE QUESTIONNAIRES; OTHER RELEVANT INFORMATION/

In this report we will want to have a look related to the teaching of the heritage protection in Italy in the different universities.

The beginning of Architectural studies are marked with the birth of "Accademia di S. Luca" in Rome, during the Renaissance period.

Them, we have chosen some of them with different characteristics, some smaller and some biggest universities; all these chosen university are public.

Now in Italy we have the possibility of studying architecture, with old plan before Bologna process, and new program after this system, who has been introduced in all our universities from 1999.

For having this general information related the studies of architecture, we have worked close with some professors of these seven universities, in different

geographical ares of our country, where can be learned Architecture.

Project team communicated with 20 recipient, from universities, public regional offices for conservation of monuments (soprintendenze), general director of Ministry, local offices for conservation (for example municipality of Roma). In Italy for some particular monuments exist specific conservation offices (such as Fabbrica di S. Pietro in Vaticano and many other principal monuments). The directors and head of offices told us that critical capability to understand monuments is best aim for our studies.

This report is organized in three parts were through the:

- I presentation of the general characteristic of system of educating the architects in Italy;
- II Determination of the qualifications and skills required in working with heritage protection and urban restoration, rehabilitation;
- III Characteristics of the teaching of heritage protection and revitalization of cities in the systems of educating and training the architects.



PART I

General characteristics of the system of educating the architects (in particular country); issues of heritage protection and revitalisation of historical cities in the system of architectural education; formal qualifications and education required from the architects dealing with heritage protection and revitalization of cities.

1.1. CHARACTERISTICS OF THE SYSTEM OF EDUCATING THE ARCHITECTS (IN PARTICULAR COUNTRY)

/inter alia: statistical data regarding the number of faculties educating the architects; the structure of the studies in field of architecture, incl. the Bologna system; the required licenses for the designing/

Architects training in Italy has an ancient tradition¹, but the modern figure of architect starts in Renaissance period with the first editions of „Trattati di architettura”².

A particular Institution that was founded to project architecture is „Accademia di San Luca”, in Rome (1593).

But the first faculty was born in Rome:

From 1914, a first time, and then from 1919, when it was created by a group of academics and designers, in which was Gustavo Giovannoni (1873–1947), the „Regia Scuola Superiore di Architettura” (afterwards, in 1935 Faculty of Architecture) appears in an independent way in front of international ones. But from some unpublished documents appears that it was created before First World War.

It was born unifying technical-constructive and scientific subject with historical and artistic ones, finishing a large process with so (many) different ways, with respect to the Giovannoni’s career (engineer with a specialization in historic art).

The importance of teaching history is a singularity of this Faculty, which perhaps has not being understood, while it opens a rich third way, different from the Weimar’s Bauhaus (born the same 1919), and even from the Fine Art school, where history was considered a catalogue of forms.

The matter of „Restauro”, taught by Giovannoni for many years, seems close to urban history, drew attention to the significance of „minor architecture” in providing continuity to the urban fabric in a historic city, and this was to become an important theme in his activities as a planner of Rome. He was director of the School of Architecture in Rome from 1927 to 1935 and was instrumental in the creation of an independent faculty for architecture where he taught Restoration of historic monuments from 1935 to 1947.

In some of his writings since 1913, Giovannoni included ideas from Max Dvořák, and from Charles Buls,

1 In Middle age the rediscovery of ancient Vitruvius treatise in monastery and its diffusion trough religious orders contributed to the birth of architectural studies. Also free cities in this period had their own organizations to build and preserve main religious and civil buildings.

2 These treatises are in detail: Vitruvius (1490), Filarete (1461), L.B.Alberti (1442).



and the idea of „urban landscape“ which feeds with Italian laws, and is reminded in the book „Vecchie città ed edilizia nuova“ from 1931. Theories providing a basis for „restauro scientifico“ and also the Italian modern.

We must remind also Vincenzo Fasolo (1885–1969).

In next generation we must remember two important names as Guglielmo De Angelis d'Ossat (1907–1992) and Renato Bonelli (1911–2004).

Renato Bonelli defined restoration as „a critical process and then a creative act, the one as an intrinsic premise of the other“, near to „idealistic thinking“ of Benedetto Croce.

De Angelis, future Director general of antiquities and Fine Arts, and founder of the school for the restoration of historic buildings, at the University of Rome, is nearer to Giovanni's ideas and defends regular maintenance and timely repairs, a methodical conservation of archeological sites and further more, it was proposed to forbid building in „historic styles“ paying attention to the „distinguishability“.

We must mention Saverio Muratori (1910–1973) who projected even urban areas, in cities such Rome and Venice.

We cannot forget Gaetano Miarelli Mariani (1928–2002) and Giovanni Carbonara (1942), who has done an important work in processing terminology with words such as (Conservation, restoration, new use for ancient building) and studying conservation of old towns without excluding new buildings, but with the knowledge of history in base.

MICRO BIBLIOGRAFIA:

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G. Miarelli Mariani, *Centri storici note sul tema*, Roma 1993.

S. Muratori, *Studi per una operante storia urbana di Roma*, Roma 1963.

V. Zucconi, a cura di, *Gustavo Giovanni dal capitello alla città*, Milano 1996.

P. Cimbolli Spagnesi, *La formazione dell'architetto a Roma prima della fondazione della Scuola superiore di architettura (1873–1914)* in *The lost art of drawing*, Rome 2016, pp 31–60.

In Italy there are these faculties of Architecture (that are 24): Bari, University of Basilicata in Matera, Bologna, Cagliari, Ascoli Piceno (University of Camerino), Catania at Siracusa, Chieti and Pescara, Enna, Ferrara, Firenze, Genova, Milano Politecnico (with courses at Lecco, Milano, Mantova, Piacenza), Napoli Federico II and Luigi Vanvitelli at Aversa, Palermo, Parma, Reggio Calabria, Roma La Sapienza University of Rome, and Roma Tre, Sassari, Torino with Politecnico, Trieste, Udine, Venezia IUAV.

Since 1999, Italian university studies have been updated in order to meet the intents of the Bologna Process. The university system, and so the training course architects, is divided into three cycles. The main Italian universities have a degree (1st cycle), Master's Degree (2nd cycle) and a PhD (3rd cycle).

First cycle. It consists exclusively in *Corsi di Laurea (Degree Courses)*. They are intended to provide students with an adequate command of general scientific methods and contents as well as specific professional skills. Italian law distinguishes between *Corsi di Laurea (Degree Courses)* in classes on the basis of common objectives and training activities to more degree courses. Classes bringing together different degree programs are defined by ministerial orders. Minimum requirement for access to the first cycle degree courses is the final secondary school diploma. For access to degree courses in class L-17 – *Scienze dell'Architettura (Architectural Sciences)*, defined in accordance with Ministerial Decree n. 270/2004, it is necessary to pass a test examination for a restricted planned access.

Ministerial Decree of August 4th 2000 identifies the knowledge that graduates should have acquired at the end of the three years degree course: good knowledge of architectural history and construction, tools and forms of representation, aspects methodological – operational aspects of mathematics and other basic sciences and aptitude in use of this knowledge to understand and describe architecture and construction issues; adequate knowledge of methodological and operational aspects of typical areas of the course of study followed and competence in identifying, formulating and solving problems by use of architecture and construction methods, techniques and tools; adequate knowledge of features regarding technical and economic feasibility, cost calculation, production process and building products realization; be able to use the techniques and tools for design of building manufactured articles; be able to communicate effectively in written and oral form, at least in one European language other than Italian.

In order to achieve Degree title, the student must have acquired 180 credits (CFU), equivalent of the ECTS credits; it can be required an internship period and the thread of a thesis or the writing of a final dissertation.

The title of the First cycle Degree gives access to the *Laurea Magistrale (MS Master of Science Degree)* and to the other courses of the Second cycle.



Second cycle. Main courses of the 2nd cycle are *Laurea Magistrale* (MS Master's Degree) ones; They offer an advanced level training for operation of high-skilled jobs in specific areas. Access to the courses is subjected to holding a Degree or a comparable foreign degree; admission depends on the specific requirements established by each university. The courses have Biennale duration.

The architecture study programs were based on DIRECTIVE 2005/36/EC OF EUROPEAN PARLIAMENT AND OF THE EUROPEAN COUNCIL on the recognition of professional qualifications and its curriculum complies with Article 46³.

The Ministerial Decree of 16 March 2007 determines Master's Degree classes and identifies the LM-4 Class – Architecture and Building Engineering-Architecture. In order to achieve the title of Master's Degree, the student must have acquired 120 credits (CFU) and have prepared and discussed a research thesis.

Some degree programs, including Architecture and Building Engineering-Architecture, are defined *Laurea Magistrale a ciclo unico* (MS Master of Science Degree in one cycle): admission requirement is a secondary school diploma or a comparable foreign degree; admission is subject to a screening test; curricula consist of 5 years. In order to achieve the title of Master Degree, students must have acquired 300 credits and have developed and discussed a research thesis.

The title Master of Science provides access to *Dottorato di Ricerca* (PhD) and other 3rd cycle courses.

Third cycle. Main 3rd cycle courses are those of the *Dottorato di Ricerca* (PhD); they have the purpose of Enganging correct methodology for advanced scientific research, adopting innovative methods and new technologies, providing internships abroad and frequency of research laboratories. Admission requires a Master's Degree (or a comparable foreign degree) and passing a competition; the duration is at least 3 years. The students must develop an innovative research thesis and discuss it during the final exam.

Other **post graduate** courses:

- **Corsi di Master Universitario di primo livello** (First-level university Master Courses corresponding to the seventh level in the descriptors of the European Qualifications Framework, EQF): courses belonging to the 2nd scientific specialization cycle or high permanent and recurrent training. It is accessed with a degree or a comparable foreign degree. The minimum duration is one year (60 credits);

3 Directive 2013/55/EU of the European Parliament and of the Council of 20 November 2013 amending Directive 2005/36/EC on the recognition of professional qualification and Regulation (EU) No. 1024/2012 on administrative cooperation through the Internal Market Information System (the IMI Regulation).

- **Corsi di Master Universitario di secondo livello** (Second-level University Master Courses, corresponding to the eighth level in the descriptors of the European Qualifications Framework, EQF): belonging to the 3rd scientific specialization cycle or high permanent and recurrent training. It is accessed with a Master's Degree or a comparable foreign degree. The minimum duration is one year (60 credits);

The University Master **post graduate** courses do not have a national teaching organization and the title is released under the independent responsibility of the individual universities.

- **Corsi di Specializzazione** (Specialization Courses in Restoration, corresponding to the eighth level in the descriptors of the European Qualifications Framework, EQF): 3rd cycle courses that aim to provide knowledge and skills for the exercise of professional high-skilled jobs. Admission requires a *Laurea Magistrale* (MS Master of Science Degree) (or a comparable foreign degree) and passing a competition; the duration of studies varies from 2 (120 CFU) to 6 years (360 ECTS) in relation to the subject area. The final title released is the **Postgraduate Diploma**.

In Italy there are schools of specialization aimed at architects in different universities (Turin, Milan, Genoa, Florence, Rome, Naples, Bari).

The graduate (1st cycle and 2nd cycle) programs concerning the architecture macro sector are active in 41 universities distributed located the national territory, and more specifically in 47 cities. The data reported so far involve courses of studies of level I and II (degrees, Master degrees, Single Cycle and still active degree programs that refer to the old regulation) aimed at training architects, landscape architects, conservators of architectural and environmental heritage, and spatial planners. Students enrolled in these degree programs in the academic year 2015–2016 are to be 64918. (Source: Bureau of Statistics MIUR – Ministry of Education, University and Research).

In order to perform design activities in Italy, you must have a Bachelor's Degree or Master's Degree; you must enjoy civil rights and it is required registration to a Professional Register, that it is subjected to passing the State Exam.

The student in possession of a title of Degree in the class LM-17 – Architectural Sciences can access Examination of State and, following an over run of the exams, he acquires the title of Junior Architect.

The person in possession of a title of Master's Degree in the class LM-4 – Architecture and Building Engineering-Architecture can access Examination of State and, following he acquires the title of Architect.

1.2. CHARACTERISTICS OF THE SYSTEM OF EDUCATING THE SPECIALISTS FOR THE HERITAGE PROTECTION AND REVITALISATION OF THE CITIES (IN PARTICULAR COUNTRY)

For this answer we have selected seven universities from different region of Italy from North to South.

The second reason has been the difference between the classical (ancient), and the new universities, after the Bologna process. In the universities that follow we can note, for each level of study, several different kindof degrees.

Related to these universities, it is evident the different methodological approach among the courses: conservation for pre-existent, restoration and “ripristine state”.

Conservation means all the processes of looking after a place so as to retain its cultural significance, and retain present even reintroducing a new use. While restoration, the so-called restauro-critic theory, is based on a historical-critic evaluation of the object. It is a strictly conservative approach considering all significant historical phases, but it takes into account both historic and aesthetic aspect and allows for reintegration of a work of art under specific condition, if this can be achieved without committing an artistic or historic fake.

Abbreviations used in following descriptions:

LT = Laurea Triennale; LM = Laurea Magistrale; LM CU = Laurea Magistrale a Ciclo Unico; MAST = Master; SPEC = Corsi di Specializzazione; DOTT = Dottorato di Ricerca.

DC = Degree Courses; MS = Master of Science Degree; MSOC = Master of Science Degree in one cycle; MAST = Master; SPEC = Specialization; PhD = Research fellow.

In Ascoli Piceno (University of Camerino), we have:

Degree Course in Architecture (3 years),with: Theory and History of Restoration (3rd year);

Degree Course in Architecture in Technology and detection for Conservation and Restoration (3 years),with: Museology and restoration for historic and artistic heritage (1st year), Laboratory for laser survey for cultural heritage (3rdyear), Laboratory of restoration (3rdyear), Laboratory for Chemical detection for cultural heritage (3rdyear);

Master of Science Degree in Architecture, with: Laboratory architectural restoration (1st year), Restoration (1st year).

In Catania-Siracusa, we have:

Master of Science Degree OC in Architecture (5 years), with: Tecnology for building refurbishment (3rdyear), Theory and History of Restoration (3rd year), Laboratory for restoration design (4nd year), Restoration (4nd year), Refurbishment and maintenance (5th year), Current technics for antiseismic proposal (5th year).

In Firenze, we have:

Degree Course in Architecture (3 years),with: Laboratory of Restoration (3rd year);

Master of Science Degree in Architecture and Landscape, with: Laboratory of Restoration (2nd year);

Master of Science Degree in Architecture, with: Laboratory of Restoration (1st year);

Master of Science Degree in Architecture (english course), with: Restoration Lab (1st year);

Master of Science Degree OC in Architecture (5 years), with: Laboratory of restoration 1 (3rd year), Laboratory of restoration 2 (4th year);

School of Specialization in Architectonical heritage and landscape (2 years);

Master for Documentation and management of cultural haeritage (20 ectis – lessons 120 hours and apprentice 100 hours);

Ph.D. in Architecture, with: History of architecture and town, Structure and Restoration of cultural heritage.

In Milano Politecnico, we have:

Degree Course in Architectural design (in Milano) (3 years),with: Historical building conservation principal (1styear), Laboratory for interior architecture design (3rd year), Laboratory for historical building conservation (facultative) Historical building conservation;

Degree Course in Architectural design (in Milano – english course) (3 years), with: Heritage preservation fundamentals (1styear), Historical building preservation studio (facultative) (3rd year);

Degree Course in Architectural design (in Mantova) (3 years),with: Historical building conservation principal (1styear), Historical building preservation studio (facultative) (3rd year), Urban and natural landscape of historical sites (3rd year);

Degree Course in Architectural design (in Piacenza) (3 years), with: Historical building conservation principal (1styear), Historical building preservation studio (facultative) (3rd year), Gardens and historical buildings characters (3rd year);

Master of Science Degree in Architectural design and History (english course), with:

History and Architectural Heritage (1styear), Sustainability and the built environment (1styear), Architectural design in historical context studio (1styear), Planning in Historical context studio (2nd year), Heritage management (2nd year), Final workshop (2nd year), Diagnosis of historic structure (facultative) (2nd year), History of building technics (facultative) (2nd year), Museology and Museography (facultative) (2nd year), Interior design in historical building (facultative) (2nd year).



Master of Science Degree in Architecture (curriculum unique) with: Archaeological restoration (1st year), Strengthening of historical buildings (1st year);

Master of Science Degree in Architecture (curriculum architectural design) with: Laboratory of architectonic restoration (1st year);

Master of Science Degree in Architecture (curriculum architectural heritage conservation) with: Construction technics history (1st year), Theory and History of restoration (1st year), Laboratory of architectural restoration (1st year);

Master of Science Degree in Architecture (curriculum architectural heritage conservation) with: Theory and technics of architectural design and for 20th century architectural preservation (1st year), Laboratory for Urban planning (2nd year), Design Laboratory (2nd year);

Master of Science Degree in Architecture (curriculum Architecture – english course) with: Architectural preservation studio (1st year);

Master of Science Degree in Architecture (curriculum Architecture of interiors – english course) with: Architectural preservation studio (1st year).

Master of Science Degree in Architectural Design (curriculum Architecture, Town and Landscape), with: Laboratory of Restoration (facultative) (1st year), Urban Restoration (1st year), Laboratory of Restoration 2 (facultative) (2nd year);

Master of Science Degree in Architectural Design (curriculum Architecture, Interior space, Architectural Design), with: Laboratory for interior design and building conservation 1 and 2 (facultative) (1st and 2nd year), Urban Restoration (1st year);

Master of Science Degree in Building and Architectural Engineering (curriculum Architectural Engineering), with: Conservation+Studio (1st year);

In Napoli, we have:

Degree Course in Architecture, with: Restoration Principales (3 years);

Master of Science Degree in Architecture and Architectural design, with: Laboratory architectural restoration (1st year), Final laboratory for contemporary architecture (2nd year);

Master of Science Degree in Design for Built Environment, with: Laboratory for Exhibiting and Museography (2nd year);

Master of Science Degree OC in Architecture (5 years), with:

Theory and History of Restoration (4th year), Laboratory of Restoration (4th year).

In Roma La Sapienza, we have:

Degree Course in Architecture (3 years), with: Stylistic characters of historic building and restoration problems (3rd year);

Master of Science Degree in Architecture, with: Reinforcement of historic building and implants (1st year), Theory and technics of restoration (facultative) (1st year), Laboratory for Monument restoration 1 (2nd year), Laboratory for Monument restoration 2 (2nd year), Management for restoration building site (facultative) (2nd year), Laboratory of restoration – Complements (2nd year);

Master of Science Degree OC in Architecture (5 years), with: Elements of restoration (Theory and technics for architectural restoration) (3rd year), Laboratory for restoration (4th year), Exhibit and museography (5th year);

School of Specialization in Architectural heritage and landscape (2 years);

We have a Ph.D. with three different titles: in History, Survey and Restoration of Architecture.

In Torino Politecnico, we have:

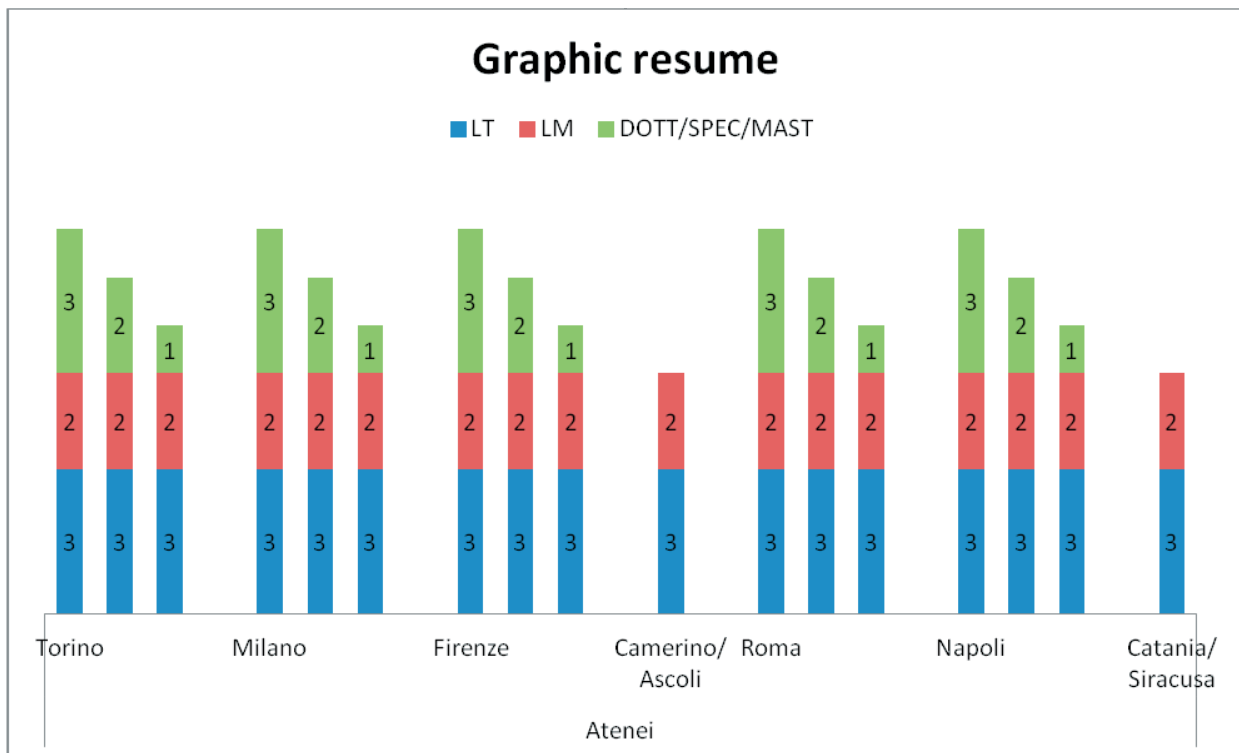
Degree Course in Architecture, with: Theory, History and Technics of Restoration (2nd year), Atelier Restoration and structure (3rd year), Restoration Theory, History and Technics (english course – 2nd year);

Master of Science Degree in Architecture, construction and city (2 years), with: Restoration (1st year), Restoration and methodology for Conservation (1st year), Restoration (english course – 1st year);

Master of Science Degree in Green areas and Landscape, with: Laboratory for Green and Landscape Restoration (2nd year);

Master of Science Degree in Architecture for Restoration and Valorization of heritage, with: Atelier for proposal in Architectural restoration (1st year), Atelier for Restoration and Valorization of heritage (2nd year);

Master of Science Degree in Architecture for Sustainable project, with: Atelier for Compatibility and Sustainability in Architectural restoration (1st year), and Atelier for Compatibility and Sustainability in Architectural restoration (english course – 1st year).



1.3. REQUIREMENTS/PERMISSIONS/ RESTRICTIONS ON CONDUCTING THE WORKS AND DESIGN BY ARCHITECTS AND OTHER PROFESSIONALS IN THE HISTORIC BUILDINGS

The first requirement, in Italy, is the degree (second level: 300 CFU).

Then it is necessary a qualification for the practice of profession.

The "Esame di Stato (Professional State Practice Exam) consist of two written test, practical and oral.

The State exam for access to section A (Architect) address the same topics planned for access to section B (Junior Architect), providing greater complexity related to light professional competence.

In order to undertake the profession of architect is not required by law an enabling internship. It is required only if we are requiring by the regulation of individual professional orders.

The architect in private practice will have to register for VAT and to subscribe to the mutual fund industry (INARCASSA). It is imposed by the law also obligation to insurance and to professional warnings.

From the Decree of President of the Republic n.137 of 2012, art.7: "it is obligatory a professional adjournment with many guidelines".

The National Council of Architect has published the guidelines on 30 July 2013.

The architects have an exclusive competence for study and practice: survey, the historic-critic analysis and analysis of the deterioration, the programme of interventions on historic-artistic pre-existence, supervision and management.

But in some particularly cases, is necessary the presence of some specialist for technical knowledge and intervention proposals.

To study and high training is obligatory: consolidation, technical installations (climatisation),humidity (guide to the measurements of moisture content in materials which conform movable and immovable cultural heritage); procedures and instruments for measuring humidity...;for churches is necessary to know about liturgical adaptation, and indoor climate (churches, chapels and other places of worships) for museal conversion.

We must remember from Charter of Venice: the conservation of monuments is always facilitated by making use of them for some socially useful purpose. Such use is therefore desirable but it must not changes the lay-out or decoration of the buildings. It is within these limits only that modifications demanded by a change of function should be envisaged and may be permitted.

In Italy, we have a specific law for evaluation and mitigation of seismic risk for cultural heritage with reference to technical rules for construction derived from the previously described cultural contest and are in compliance with the Ordinance of the Prime Minister n. 3274/2003 "first elements on the topic of general criteria for seismic classification on a territorial scale and standards for construction in seismic zone".



This Ordinance establish that the department of civil Protection should issue within six months of the Ordinance a scheduled program for assessing and identifying the typologies of buildings which need to be verified.

Appendix no. 2 of the Ordinance, "Technical rules for the design, evaluation and seismic assessment of building, and in particular Chapter 11 "Exisiting building" led to collaborate between the General Direction of Architectural Heritage and Landscape of the Ministry for Cultural Heritage and Activities, and Department of Civil Protection.

Appendix n.2 of this Ordinance, Technical rules for the design, evaluation and seismic assessment of building, explains: "for cultural heritage, it is in any case possible to limit strengthening interventions according to what is outlined in paragraph 4 art. 29 of legislative decree no. 42/2004 "code for cultural heritage and landscape", and it is furthermore necessary to calculate the level of peak ground acceleration corresponding to the attainment of an expected ultimate limit state for the structural typology of the building, both before and after the trengthening interventions".

On the basis of these tools, on 23rd of May 2005 an inter-ministerial decree was prepared for the creation of a working group wich outline a document aimed at the issurance of Guidelines for application of the technical regulations linked to Ordinance no. 3274/2003 in the sector of cultural heritage.

From n.350, year 2001, Decreet from Republic President

Chapter III. Certificate of activity's beginning.

Art.22

Works in order to fix a certificate of activity's beginning.

1. May be realized by the certificate of activity's beginning in order with article 19, law number 241, from 7th August 1990, and in order with urbanistic instruments, and previsions, construction laws and discipline regulament in planning and construction:
 - a) Straordinary maintenance works, from article 3, paragraph 1, letter b, works in the structure of the building.
 - b) Works in restoration and conservative process from article 3, paragraph 1, letter c, when may be done in the structure of the building.

From Legislative Decreet n.50, 18th april 2016, art. 147 (Level and contents in projects)

Paragraph 2.

For working in heritage in reference with practical projects, may be done a technical schedule, in order to recognize the character and values of the building where works are going to take part, wich it must be done by the professional who has competence for doing these works.

Paragraph 6.

The director of the works, the technical support for the single responsible of the process and the director of the three years program, even the responsible of finish certificate may be a restorator with legal qualifications, or in dependence of the type of work, another professional from paragraph 9-bis from heritage and landscape bill, with more than five years of experience and specific competence with the work to be done.

1.4. REQUIREMENTS/QUALIFICATIONS FOR TAKING UP POSITIONS IN THE CONSERVATION SERVICES ADMINISTRATION

From the last announcement of a competitive examination of Ministry of Cultural Heritage and Tourism,

We have the clear rule for a taking up positions for architect and other professional figures in the field of conservation (archaeologist, librarian, restorer, historic o art....).

The law of 28 december 2015 is dedicated for these professional figures.

The requirements necessary are:

1. Master of Science degree, or degree law n.341 of 1990, in architecture, architecture and landscape,
2. Specialization Course after degree:
 - a. Architectonic heritage and landscape
 - b. Landscape heritage: park and garden, and environmental and naturalistic system;
3. Phd,History, survey, conservation of architecture.

Universitary Master II level (II years) inside in Conservation of the cultural heritage.
4. Professional State Practice Exam.

Simplifying from a local administration, may be take notice the one from Municipality of Rome:

Requirements for further Regional departments administrations and Civic departments administrations are: Bachelor degree, Master Degree, gained at public universities and also at legally appointed universities, related to architecture and urban planning. Other titles required are post-degree specialization or post-degree update studies courses gained at universities or other institutions and related to the professional practice profile in conservation, and these courses are gained after a final exam.

MICRO BIBLIOGRAFY:

Methodical Approach to the Restoration of Historic Architecture, edited by Calogero Bellanca, Firenze 2011.

Conserving the authentic: Essays in honour of Jukka Jokilehto, edited by Nicholas Stanley-Price and Joseph King, Rome 2009

PART II

Determination of the qualifications and skills required in working with heritage protection and urban rehabilitation /in light of the practical experience / based on the information gathered in the Questionnaires – Part I

2.1. WHAT ISSUES / PROBLEMS RELATED TO HERITAGE PROTECTION AND REVITALISATION OF HISTORICAL CITIES SHOULD BE TAUGHT ON ARCHITECTURAL STUDIES?

[please list separately the particular issues and determine their scope, e.g. the theory of conservation, the legal basis for the heritage protection, monuments adaptation to modern functions, the design of new buildings in historical areas]

One of the most important character that the architect should have is the capacity to analyse the historical – artistic, values, and the relationship of commemorative values... But it is necessary the capacity for architectural survey, the historical–critical analysis and another important point is the use of value. Physical life is a precondition for all psychic life and is therefore more important.

The former can, at least, prosper just as well without the higher form of psychic life but not vice-versa.

The fact that innumerable secular and ecclesiastic monuments (pre-existence) can still be put in practical use today, and are actually being used does not need to be proved. If they were out of use, substitutions would be required in most cases. This demand is so compelling that age value's counter claim to leave monuments to their natural fate, could only be considered if one intended to produce substitutions of at least equal quality.

The architects should have methodical approach, criteria, but restoration is not philosophy, it is not science, it is not technique, it is incarnated in architecture. We can insist on the restoration which is defined as being critical, moves from the affirmation that every intervention constitutes a case to itself which cannot be framed in categories, ... not answering to prefixed rules or to dogmas of any kind, but which must be reinvented with originality, time after time, case by case, in its criteria and its methods. It will be the "oeuvre" itself, carefully investigated with historical–critical sensitivity and with technical competence, that will suggest to the restorer the correct path to embark on.

Hence restoration is an act of culture and is, simultaneously, highly specialistic. At the same time there is agreement with some authors..., who states the restoration finds its legitimate reason only in the historical present, that is to say, on the oeuvre which time, with its marks. Delivers to us.

So, history and theory of conservation are the principal matters to be taught.

Conservation prevalently runs towards the arresting of the process of the oeuvre, as least when it is understood as pure conservation with the explicit aim of break any advance of aesthetic and critique itself.

Restoration that can be defined as 'critical' moves from the affirmation that every intervention constitutes a case in itself, it does respond to present rules or dogma of any kind, but should rather reinvented with originality, ...



So the architects must know the Principal Charters among heritage In Europe and in other contest, wichare:

Boito Document 1883–1884 (III Congress of Italian Architects and Engineers), Poland Charter 1909, Athens Charter 1931, Venice Charter 1964, Italian Restoration Charter 1972, European Charter of the Architectural Heritage, Council of Europe 1975, Declaration of Amsterdam 1975, Convention for the protection of the architectural heritage of Europe, Granada 1985, Nara Document of Authenticity 1994, UNESCO Universal declaration on Cultural diversity Paris 2001, ICOMOS Charter, Principles for analysis, conservation and structural restoration of architectural heritage, Victoria falls 2003, Recommendation on the historical urban Landscape, Paris 2011.

Finally, we hope are necessary: ... “The Standardisation on cultural heritage from the European Standardisation Committee CEN(TC 346)”.

But it is necessary the historical-critic analysis, central nucleus of the study of architecture, the process continues with the architectural description of the ensemble of the construction and with direct analysis, at the appropriate metric scales, of the constructive features. This also takes through the opportune references to previous and coeval episodes in the history of the architecture and the artistic expression history of architecture, history of cities and town planning.

2.2. WHAT QUALIFICATIONS SHOULD THE ARCHITECTS HAVE IN THE FIELD OF HERITAGE PROTECTION AND REVITALIZATION HISTORICAL CITIES?

[please list separately the qualifications and describe them, e.g. knowledge of specific design programs, the ability to evaluate the technical condition of the historical building, the ability to analyse the historical values]

The architects should have at least these qualifications and abilities:

- Ability to analyse historical value, Artistic value,
- Ability of analyse in its contest, historical iconography,
- Ability for historical-critical analysis,
- Ability to find references and analogies,
- Ability of the stylistic and construction features,
- Ability for analysis of masonries,
- Ability in metrological analysis, (the layout diagrams of the possible architectural organism through time),
- Ability to evaluate technical condition (analysis of the current state),
- Ability to study the deterioration... (reading decay, materials, mapping of deterioration),
- Ability in intervention proposal,

Ability in structural analysis, based on the schematization of the static functioning of the architecture and the analysis of the form of structural deterioration,

Ability in analysis of the form of deterioration of current state

Ability on the basis of the architectural survey, a mapping out the typologies of deterioration detected on the façade.

Ability in identify all the forms of deterioration present with the relative causes and some indications can be supplied for the restoration intervention with specific remedies for the various pathologies identified.

Ability in identification of the various types of plaster (daubing, rough cast, finishing cast), through the laboratory analysis; it is possible to identify the constituent and materials and hence better understand the mechanism of deterioration and the hypothesis of critical-conservative restoration for the surface. The critical-conservative intervention, with a more evident desire to conserve the image and the material in their critical process.

Ability to choose the best solution of those possible, compatible with its value.

Ability to choose the best intervention proposal and adaptation project, (compatibility, reversibility, less is more intervention).

Ability to choose a new use, for example museum adaptation with insertion to facilitate access for disabled people.

The planning proposal for restoration interventions or finishings and to facilitate accessibility are highlighted.

The pedestrian areas of urban spaces may be planned to facilitate its fruition by the residents and all solutions proposed for adaptation, compatible with the existing structures, with the improvement of the microclimatic conditions presented.

A particular approach must be reserved to the colour of the historical town.

The issue of colour in the historical town has been tackled, for many years, since the end of the 1960s, exclusively from aesthetic perspective; the whole matter was reduced to very elementary indications within the Building Codes which supplied some general guidelines for the controlling of interventions on the facades of historical edifices.

Paul Philippot wrote: “To talk about the colours of a town means to deal with an extremely complex subject. The town is, effectively a living body and thus, by definition, is in continuous interfering with one another: that of the individual edifice, the transformations of which in the passing of time entail frequent changes to the original colours, and the town-planning level of the transformation of greater or smaller complexes, which goes especially to unify the appearance of a group of buildings, in virtue of the variations in taste and the preference in colour”.

2.3. CHARACTERISTICS OF THE GENERAL APPROACH TO HERITAGE PROTECTION AND REVITALIZATION OF HISTORICAL CITIES, WHICH SHOULD BE TAUGHT AT THE FACULTIES OF ARCHITECTURE

[e.g. the traditional approach, which recognizes the primacy of heritage protection over contemporary needs; inadmissibility of procedures such as reconstruction, restoration; the admissibility of extensive interventions in the historical areas treated as a continuation of their development]

The general approach to heritage protection and revitalization of historical cities may be with criteria and method. Will be necessary the general view. Nevertheless, it seems opportune to remember that, in these episodes between the end and the beginning of the new century, we can find lexical misunderstandings in the doctrinal terminology as well as in the directives of restoration, conservation and maintenance. Firstly, one must stress that "restoration, is not merely simple repristination, consolidation of a structure, functional repair, ...neither is it the more or less integral reconstruction of a artefact, ...nor is it the so-called reuse, with its derivatives and analogies, such as revitalization and re-evaluation, reanimation, recycling or recovery, regeneration, conversion, innovation or modernization. Restoration is not safeguard, maintenance or prevention, either", all these are important interventions but they nonetheless remain in the field of conservation.

The enunciation of restoration underlines a substantial convergence in the recognition of the respect for the historical and critical process of the oeuvre and the insertion of the new, or rather, of contemporary for consolidation or for functional adaptation.

While Renato Bonelli states (1959), that "restoration is ...hence begun with a true critical process aimed at the qualification and characterisation of the monument", and Cesare Brandi, in 1963, stresses that "by restoration, one generally means any intervention aimed at returning to efficiency a product of human activity, restoration constitutes the methodological moment of the recognition of the work of art in its physical consistency and in the two-fold aesthetic-historical polarity, in view of its transmission to the future".

But in urban planning and heritage town the preservation of the fabric by beneficial use is the prime objective.

The historic centre is a constituent of a larger whole and should be studied as part of the present-day dynamic reality, not a static object of contemplation and tourist attraction.

The integrated conservation implies reconciling conservation requirements and town planning objectives,

considering the values and interest of the existing historic fabric as equal in status to other factors in the general planning process.

One of the object of urban conservation is to control the rate of change in the urban system, were therefore need to comprehend the life forces of that system and the potential causes of its decay.

In the urban planning context, revitalization means the planning measures that are necessary to improve the social and economic activities of an historic area or an historic town, which has lost its origin use and functional vitality and as a consequence, historic buildings and urban spaces have become redundant and dilapidated. The aim of revitalization should be an appropriate balance between conservation and development.

Infill design, it is primary objective of conservation planning, particularly concerning to give strict priority to the conservation of existing historic architecture. The building of new structures should not be an excuse for demolishing old ones.

New construction may, however, be necessary to re-establish functional and architectural continuity, and in cases where empty lots, might be hazardous to us or further decay surrounding buildings. Requirements of contemporary citizen and urban evaluation, urban evolution theory and interventions examples, new definition of legal protection models in urban planning, people participation in urban planning.

2.4. OTHER POSITIVE AND NEGATIVE REMARKS ON CURRENT EDUCATION OF ARCHITECTS AND THEIR ATTITUDE TO HERITAGE PROTECTION AND REVITALISATION OF HISTORICAL CITIES

[e.g. lack of knowledge of the principles of revitalisation of the historical cities, lack of knowledge of the history of architecture, lack of respect for the historical architecture, a positive attitude towards the heritage protection]

In these age, the society use and abuse many words without idea, without culture, only for fashion, and too much use of internet without study a direct knowledge. Many people go in some events because others have gone, only for an image...

These are the principal reasons for the crisis. Today the society of appearance is dominant, with lack of criteria, with a progressive level downwards.

Through Positive remarks:

Sustainable advantages of ancient and traditional materials,

New materials improvement,

New techniques improvement in representation,



The obligatory of presence in some of the matters. But most of all, the passion and enthusiasm that professors transmit in some matters, are received from the students with interest.

The visit to monuments, to museums, to restoration works, the external contributes, wich complete the "ex catedra" lessons, and the individual exercises on study, restoration and adapatation of the remains.

Through Negative remarks:

Lack of common vocabulary among building and architectural fields,

No people participation,

Usually students arrive at the University with a low level of knowledge. The organizations of the courses in semesters, instead of complete years, have reduced the capacity of study and learn. Specially in some matters wich needs the experience of reading in a historical-critical way, the different phases of a monument.

The students have lost the capacity of studing and searching in libraries and archives, and consequently have lost the capacity of reading the architecture reality.

But many students ask a great interest for the training, with the costant presence and attention to the conservation action.

PART III

Characteristics of the teaching of heritage protection and revitalization of cities in the systems of educating the architects /along with the examples of syllabi/ /based on the information gathered in the Questionnaires – Part II/

3.1. LIST AND DESCRIBE THE COURSES RELATING TO HERITAGE PROTECTION AND REVITALISATION OF MONUMENTS, TAUGHT AT THE FACULTIES OF ARCHITECTURE

- *[please specify the courses and include their detailed programmes;*
- *specify the structure of each course – division into lectures and design classes;*
- *describe the purpose and scope of these courses;*
- *make a critical evaluation – identify the courses considered to be the best (to be used in a model programme)]*

This list of courses, that we present contributes to take notice of how important is the matter on Conservation of Heritage, in Italian faculties of architecture.

In the three courses degree and in the specialized in Conservation, the study of pre-existence and of use is essential.

We hope to enhance everywhere these improvements.
Camerino

This is a recent university, was founded in 1993. The Conservation, history and survey courses are at second and third years in degree of Science of Architecture; while in Master of Science Degree are at first and second years. The university presents a course in Degree course in Technology and detection for conservation and restoration, with other teaching at first year.

Catania/Siracusa

In this university (—). the courses are dedicated to History at first and second years; while the Conservation and Restoration, with antiseismic and city planning programs are at third, fourth and fifth years.

In Roma, Firenze, Napoli, Milano, Torino, other ancient and historical universities, it's possible to choose among a wide number of courses at each level of the studies inside a various kind of arguments. The theory and practice of Conservation, Restoration, Rehabilitation are present at every level of the degrees. More there are some Master aimed to particular branches of conservation.

But the heart of Italian system for training in Conservation, Restoration and Rehabilitation of cultural heritage, architecture and landscape are the Schools of Specialization in two years.

Abbreviations used in following descriptions:

LT = Laurea Triennale; LM = Laurea Magistrale; LM CU = Laurea Magistrale a Ciclo Unico; MAST = Master; SPEC = Corsi di Specializzazione; DOTT = Dottorato di Ricerca.

DC = Degree Courses; MS = Master of Science Degree; MSOC = Master of Science Degree in one cycle; MAST = Master; SPEC = Specialization; PhD = Research fellow.

UNIVERSITY OF ASCOLI-CAMERINO						
FACULTY	DEGREE	NAME	TEACHING	ECTS	HOURS	YEAR
School of Architecture and Design Eduardo Vittoria	DC	Degree Corse SCIENCE OF ARCHITECTURE (L-17)	HISTORY OF ANCIENT AND MIDDLE AGE ARCHITECTURE	8	80	II
	DC		SURVEY OF ARCHITECTURE AND TOWN	6	60	II
	DC		HISTORY OF MODERN ARCHITECTURE	8	80	III
	DC		THEORY AND HISTORY OF RESTORATION	6	60	III
Scuola di Ateneo – Scienze eTecnologie	DC	Degree Corse IN TECHNOLOGY AND DIAGNOSIS FOR CONSERVATION AND RESTORATION (L-43)	CULTURAL HERITAGE LAW	6	48	I
	DC		MUSEOLOGY AND RESTORATION OF HISTORICAL-ARTISTIC HERITAGE	8	56	I
	DC		HISTORY OF ARCHITECTURE	6	48	II
	DC		LABORATORY FOR CHIMICAL DETECTION OF CULTURAL HERITAGE	15	49(L)+ 80(E)	II
	DC		RESTORATION LABORATORY	8	28(L)+ 40(E)	II
School of Architecture and Design Eduardo Vittoria	MS	Master of Science Degree IN ARCHITECTURE (LM 4)	ARCHITECTURAL RESTORATION LABORATORY AR0042	12	50(L)+ 100 (E)	I
	MS		HISTORY OF CONTEMPORARY ARCHITECTURE	8	80	I

UNIVERSITY OF CATANIA							
FACULTY	DEPARTMENT	DEGREE	NAME	TEACHING	ECTS	HOURS	YEAR
ARCHITECTURE	CIVIL ENGINEERING AND ARCHITECTURE DICAR	MSOC	ARCHITECTURE	HISTORY OF CONTEMPORARY ARCHITECTURE	8	80	
		MSOC		HISTORY OF ANCIENT AND MIDDLE AGE ARCHITECTURE	8	80	II
		MSOC		TECHNOLOGY FOR BUILDING REFURBISHMENT	6	60	III
		MSOC		THEORY AND HISTORY OF RESTORATION	6	60	III
		MSOC		LABORATORY FOR PROJECT 4 – RESTORATION	15	180	IV
		MSOC		RESTORATION	8	80	IV
		MSOC		ANALISYS OF URBAN AND BUILDING TYPOLOGY	6	60	V
		MSOC		MODERN TECHNICS FOR ANTISEISMIC DESIGN	8	80	V
		MSOC		HISTORY OF THE CITY AND TOWN PLANNING	8	80	V
		MSOC		REFURBISHMENT AND BUILDING MAINTENANCE	6	60	V

UNIVERSITY OF FIRENZE							
faculty	department	degree	name	teaching	ects	hours	year
ARCHITECTURE	ARCHITECTURE (DIDA)	DC	Degree Corse IN SCIENCE OF ARCHITECTURE (B008)	HISTORY OF ARCHITECTURE 1	8	80	I
		DC		HISTORY OF ARCHITECTURE 2	8	80	II
		DC		RESTORATION LABORATORY	8	68	III
ARCHITECTURE	ARCHITECTURE (DiDA)	MS	Master of Science Degree IN ARCHITECTURE AND LANDSCAPE (B067)	HISTORIC CARTOGRAPHY FOR LANDSCAPE	6	48	II
		MS		RESTORATION LABORATORY (B015443) History of parks and gardens Restoration of historical gardens Urban entomology Vegetal pathology of green areas	15	120	II
		MS		HISTORY OF ENVIRONMENT	6	48	II
		MS	Master of Science Degree IN ARCHITECTURE (13076) Curriculum ARCHITECTURAL DESIGN In this course we have insame time english and italian teachings	RESTORATION LABORATORY (13018854) RESTORATION GEOMATIC FOR BUILT HERITAGE CONSERVATION STATIC AND STABILITY OF MASONRY STRUCTURES	18	144	I
		MS		HISTORY OF CONTEMPORARY ARCHITECTURE AND TOWN	6	48	I
ARCHITECTURE	ARCHITECTURE (DIDA)	MSOC	Master of Science Degree One Cycle IN ARCHITECTURE (B117)	HISTORY OF ARCHITECTURE 1	8	80	I
		MSOC		HISTORY OF ARCHITECTURE 2	8	80	II
		MSOC		RESTORATION LABORATORY 1	8	64	III
		MSOC		HISTORY OF ARCHITECTURE 3	8	80	III
		MSOC		RESTORATION LABORATORY 2	8	64	IV

UNIVERSITY OF FIRENZE						
faculty	degree	name	teaching	ects	hours	year
ARCHITECTURE	SPEC	SCHOOL OF SPECIALIZATION IN CULTURAL HERITAGE AND LANDSCAPE		120		
			LABORATORY OF CITY HISTORY AND ENVIRONMENT	10	50	1
			LABORATORY FOR SURVEY	6	30	1
			LABORATORY FOR ANALYSIS OF HISTORIC BUILDING	8	40	1
			LABORATORY FOR DETECTION	12	50	1
			LABORATORY FOR HISTORY OF ARCHITECTURE AND DECORATION	8		
			LABORATORY FOR ENVIRONMENTAL CONSERVATION	12	50	1
			CULTURAL HERITAGE LAW	4		
			LABORATORY FOR MUSEOGRAPHY	10		
			LABORATORY FOR REFURBISHMENT	14	70	II
			ARCHITECTURAL RESTORATION LABORATORY	14	70	II
			LABORATORY OF ARCHAEOLOGICAL CONSERVATION	8		II
			THESIS LABORATORY	18		II
MAST, MANAGEMENT OF CULTURAL HERITAGE,						
ECTS 20, HOURS 120+100						
MAST, LANDSCAPE, ECTS 60						
PH.D., DOCTORATE IN ARCHITECTURE, ECTS 180						

POLITECNICO OF MILANO							
faculty	department	degree	name	teaching	ects	hours	year
SCHOOL OF ARCHITECTURE URBAN PLANNING AND BUILDINGS ENGINEERING	DEPARTMENT OF ARCHITECTURE AND URBAN STUDIES (DASTU)	DC	Degree Course in ARCHITECTURE DESIGN (Mantua)	HISTORICAL BUILDING PRESERVATION STUDIO Principles of the conservation project of historical buildings Architectural Survey	12	35(L)+ 15(E)	III
		DC		THE RENAISSANCE AND THEARTS	4	22(L)+ 18(E)	III
		DC		HISTORY OF ARCHITETURE 1	8	44(L)+ 36(E)	I
		DC		FUNDAMENTALS OF CONSERVATION OF HISTORIC BUILDINGS	4	19(L)+ 23(E)	I
		DC		HISTORY OF ARCHITECTURE II	8	44(L)+ 36(E)	II
		DC		LABORATORY OF CONSERVATION OF HISTORIC BUILDINGS Fundamentals of design for historic buildings Urban Design	12	56(L)+ 39(E)	III
		DC	DegreeCourse in ARCHITECTURE DESIGN (Milan) Course delivered in english	HISTORY OF ARCHITECTURE 1	8	44(L)+ 36(E)	I
		DC		HERITAGE PRESERVATION FUNDAMENTALS	4	19(L)+ 23(E)	I
		DC		HISTORY OF ARCHITECTUREII	8	44(L)+ 36(E)	II
		DC		HISTORICAL BUILDING PRESERVATION STUDIO Principles of the conservation Project of historical buildings Materials of historical buildings	12	75(L)+ 52(E) + 83 (DL)	III
		DC	Degree Course in ARCHITECTURE DESIGN (Milan)	CONSERVATION OF HISTORIC BUILDINGS FUNDAMENTALS	4	19(L)+ 23(E)	I
		DC		HISTORY OF ARCHITECTUREII	8	44(L)+ 36(E)	II
		DC		LABORATORY OF CONSERVATION OF HISTORIC BUILDINGS Principles ofthe conservation project of historical buildings Architectural Survey	12	56(L)+ 39(E) + 62 (DL)	III
		DC		HISTORY OF CITIES AND ENVIRONMENT History of modern urban planning History of urban and environment transformation	12	44(L)+ 36(E)	I
		DC		HISTORY OF ARCHITECTURE AND CONSTRUCTION TECHNIQUES	6	45(L)+ 11(E)	I
		DC		PRINCIPLES OF ANALYSIS AND DIAGNOSTICS OF BUILDINGS	6	32(L)+ 32(E)	III

POLITECNICO OF MILANO										
faculty	department	degree	name	teaching	ects	hours	year			
SCHOOL OF ARCHITECTURE URBAN PLANNING AND BUILDINGS ENGINEERING	DEPARTMENT OF ARCHITECTURE AND URBAN STUDIES (DASTU)	MS	ARCHITECTURE Curr. ARCHITECTURAL DESIGN Cod. 1136	THEORY AND HISTORY OF TWENTIETH CENTURY SECOND HALF ARCHITECTURE	6	33(L)+27(E)	I			
		MS		LABORATORY OF ARCHITECTURAL RESTORATION Cod. 093333 RESTORATION, ARCHITECTURAL SURVEY, HISTORY AND CRITICS OF CONSERVATION	14	66(L)+46(E) + 73(DL)	II			
		MS	ARCHITECTURE Curr. CONSERVATION OF CULTURAL HERITAGE AND LANDSCAPE Cod. 1136	STORIA DELLE TECNICHE DI COSTRUZIONE	6	33(L)+27(E)	I			
		MS		THEORY AND HISTORY OF CONSERVATION	4	19(L)+23(E)	I			
		MS		TWENTIETH CENTURY ARCHITECTURE DESIGN AND CONSERVATION Cod. 097758 THEORY AND TECHNICS FOR ARCHITECTURAL DESIGN, TWENTIETH CENTURY ARCHITECTURE CONSERVATION	8	38(L)+46(E)	I			
		MS		CULTURAL HERITAGE ECONOMIC ASSESMENT	4	19(L)+23(E)	I			
		MS		LABORATORY OF ARCHITECTURAL RESTORATION Cod. 093333 RESTORATION, STRUCTURAL REINFORCEMENT, DIGITAL SURVEY	14	66(L)+46(E) + 73(DL)	I			
		MS		URBAN PLANNING LABORATORY Cod. 099553 URBAN PLANNING, ECONOMY FOR URBAN PLANNING AND DEVELOPMENT, RESTORATION	14	65(L)+45(E) + 72(DL)	II			
		SCHOOL OF ARCHITECTURE URBAN PLANNING AND BUILDINGS ENGINEERING		DEPARTMENT OF ARCHITECTURE AND URBAN STUDIES (DASTU)	MS		LABORATORY OF DESIGN Cod. 099555 INTERIOR DESIGN AND EXHIBIT RESTORATION BUILDING PHYSICS AND ENERGETIC DESIGN	14	66(L)+46(E) + 73(DL)	II

POLITECNICO OF MILANO							
faculty	department	degree	name	teaching	ects	hours	year
		MS	ARCHITECTURE Curr. INTERIOR DESIGN Cod. 1136	THEORY AND HISTORY OF TWENTIETH CENTURY SECOND HALF ARCHITECTURE	6	33(L)+27(E)	I
		MS		LABORATORY OF RESTORATION Cod. 093369 RESTORATION BUILDING PHYSICS INTERIOR DESIGN	14	66(L)+46(E), 73(DL)	I
		MS		HISTORY AND THEORY OF THE TWENTIETH-CENTURY ARCHITECTURE	6	33(L)+27(E)	I
		MS		HISTORY AND THEORY OF ARCHITECTURE	6	33(L)+27(E)	I
		MS		ARCHITECTURAL PRESERVATION STUDIO Cod. 093384 ARCHITECTURAL PRESERVATION, ARCHITECTURAL ANALYSIS AND REPRESENTATION, MUSEOLOGY ART AND CRITICISM	14	65(L)+45(E) + 72(DL)	I
		MS		ARCHITECTURAL PRESERVATION, SURVEY ADVANCED TECHNIQUES, RESTORATION METHODS AND PRACTICES	14	65(L)+45(E)+ 72(DL)	I
		MS		ARCHITECTURAL PRESERVATION, ARCHITECTURAL ANALYSIS AND REPRESENTATION, RESTORATION METHODS AND PRACTICES	14	65(L)+45(E) + 72(DL)	I
		MS	ARCHITECTURE Curr. ARCHITECTURE OF INTERIORS (ENG LISH) Cod. 1136	HISTORY AND THEORY OF THE TWENTIETH-CENTURY ARCHITECTURE	6	33(L)+27(E)	I
		MS		HISTORY AND THEORY OF ARCHITECTURE	6	33(L)+27(E)	I
		MS		ARCHITECTURAL PRESERVATION STUDIO Cod. 097794 ARCHITECTURAL PRESERVATION, BUILDING PHYSICS, INTERIORS	14	65(L)+45(E) + 72(DL)	I
		MS	ARCHITECTURE Curr. TECHNOLOGICAL AND ENVIRONMENT DESIGN Cod. 1136	LABORATORY OF ARCHITECTURAL RESTORATION Cod. 093369 RESTORATION, DIGITAL SURVEY TECHNICS, HISTORICAL BUILDINGS ARCHITECTURAL TECHNICS	14	66(L)+46(E) 73(DL)	II

POLITECNICO OF MILANO							
faculty	department	degree	name	teaching	ects	hours	year
		MS	ARCHITECTURE – ARCHITECTURAL DESIGN Curr. INTERIOR DESIGN Cod. 1018	URBAN CONSERVATION	4	35(L)+ 15(E)	I
		MS	ARCHITECTURE – ARCHITECTURAL DESIGN Curr. ARCHITECTURAL DESIGN Cod. 1018	HISTORY OF CONTEMPORARY ARCHITECTURE	4	35(L)+ 15(E)	I
		MS	ARCHITECTURE – ARCHITECTURAL DESIGN Curr. ARCHITECTURAL DESIGN Cod. 1018	INTERIOR DESIGN AND PRESERVATION STUDIO 1 Cod. 099859 INTERIOR DESIGN, ARCHITECTURAL PRESERVATION	12	60(L)+ 120(E)	I
		MS	ARCHITECTURE – ARCHITECTURAL DESIGN Curr. ARCHITECTURAL DESIGN Cod. 1018 (ENGLISH COURSES)	RESTORATION DESIGN STUDIO1 Cod. 051066 MATERIALS FOR CULTURAL HERITAGE, ARCHITECTONICAL RESTORATION	12	20(L)+ 40(DL)	I
		MS	ARCHITECTURE – ARCHITECTURAL DESIGN Curr. ARCHITECTURAL DESIGN Cod. 1018 (ENGLISH COURSES)	URBAN RESTORATION	4	20(L) + 40(DL)	I
		MS	ARCHITECTURE – ARCHITECTURAL DESIGN Curr. ARCHITECTURAL DESIGN Cod. 1018 (ENGLISH COURSES)	HISTORY OF CONTEMPORARY ARCHITECTURE	4	20(L)+ 40(DL)	I
		MS	ARCHITECTURE – ARCHITECTURAL DESIGN Curr. ARCHITECTURAL DESIGN Cod. 1018 (ENGLISH COURSES)	INTERIOR DESIGN AND PRESERVATION STUDIO 2 Cod. 099860 INTERIOR DESIGN, ARCHITECTURAL PRESERVATION	12	60(L)+ 120(E)	II
		MS	ARCHITECTURE – ARCHITECTURAL DESIGN Curr. ARCHITECTURE, TOWN, LANDSCAPE Cod. 1018	LABORATORY OF RESTORATION1 Cod. 099849 ARCHITECTONICAL RESTORATION, MATERIALS FOR CULTURAL HERITAGE	12	20(L)+ 40 (DL)	I
		MS	ARCHITECTURE – ARCHITECTURAL DESIGN Curr. ARCHITECTURE, TOWN, LANDSCAPE Cod. 1018	URBAN CONSERVATION	4	35(L)+ 15(E)	I
		MS	ARCHITECTURE – ARCHITECTURAL DESIGN Curr. ARCHITECTURE, TOWN, LANDSCAPE Cod. 1018	HISTORY OF CONTEMPORARY ARCHITECTURE	4	35(L)+ 15(E)	I
		MS	ARCHITECTURE – ARCHITECTURAL DESIGN Curr. ARCHITECTURE, TOWN, LANDSCAPE Cod. 1018	LABORATORY OF RESTORATION1 Cod. 096602 ARCHITECTONICAL RESTORATION, HISTORICAL BUILDINGS STRUCTURES	12	60(L)+ 120(DL)	II
		MS	ARCHITECTURE – ARCHITECTURAL DESIGN Curr. ARCHITECTURE, TOWN, LANDSCAPE Cod. 1018	LABORATORY FOR MONUMENTS CONSERVATION Cod. 099875 LABORATORY FOR MONUMENTS CONSERVATION ARCHITECTONICAL RESTORATION, SEISMIC ASSESMENT, BUILDING SURVEY	12	20(L) 40(DL)	I

POLITECNICO OF MILANO

faculty	department	degree	name	teaching	ects	hours	year
		MS		ARCHITECTURE AND MATERIALS FOR CULTURAL HERITAGE Cod. 099877 RESTORATION THEORIES, MATERIALS FOR HISTORICAL BUILDINGS	8	40(L)+ 80(E)	I
		MS		CONSTRUCTIONS HISTORY	4	35(L)+ 15(E)	I
		MS	ARCHITECTURE – BUILDING ARCHITECTURE Curr. BUILDING ARCHITECTURE Cod. 1017	LABORATORY FOR MONUMENTS CONSERVATION Cod. 099890 ARCHITECTURAL DESIGN, ARCHITECTURAL RESTORATION, SEISMIC RESPONSE, TECHNOLOGICAL DESIGN, IMPLANTS	30	150(L)+ 300(DL)	II
		MS	ARCHITECTURE – BUILDING ARCHITECTURE Curr. BUILDING ARCHITECTURE Cod. 1017	ARCHITECTURES AND MATERIALS FOR HISTORIC HERITAGE Cod. 099918 THEORIES OF RESTORATION, MATERIALS IN ARCHITECTURE	8	40(L)+ 80(DL)	I
		MS	(ENGLISH COURSES)	HISTORY OF BUILDING CONSTRUCTIONS	4	35(L)+ 15(E)	I
		MS	CORSO DI LAUREA IN ARCHITECTURAL DESIGN AND HISTORY (MANTOVA) Cod. 1086 (ENGLISH COURSES)	HISTORY AND ARCHITECTURAL HERITAGE Cod. 098523 HISTORY OF ITALIAN ARCHITECTURE (XV-XVIII CENTURY), THEORY OF PRESERVATION	8	41(L)+ 41(E)	I
		MS		ARCHITECTURAL DESIGN STUDIO Cod. 097697 ARCHITECTURAL DESIGN, URBAN HISTORY, ARCHITECTURAL REPRESENTATION	12	56(L)+ 39(E)+ 62(DL)	I
		MS		ARCHITECTURAL DESIGN IN HISTORICAL CONTEXT STUDIO	12	65(L)+ 45(E)+ 72(DL)	I
		MS	CORSO DI LAUREA IN ARCHITECTURAL DESIGN AND HISTORY (MANTOVA) Cod. 1086 (ENGLISH COURSES)	PLANNING IN HISTORICAL CONTEXT STUDIO Cod. 099632 URBAN DESIGN, LANDSCAPE ARCHITECTURE	12	56(L)+ 39(E)+ 62(DL)	II
		MS		HERITAGE MANAGEMENT Cod. 099636 CULTURAL HERITAGE LAW, ECONOMICAL APPRAISAL	8	66(L)+ 54(E)	II
		MS		HISTORY OF CONTEMPORARY ARCHITECTURE	8	44(L)+ 36(E)	II
		MS		FINAL WORKSHOP ANCIENT AND NEW Cod. 099643 ARCHITECTURAL DESIGN, ARCHITECTURAL PRESERVATION, SURVEY ADVANCED TECHNIQUES	12	56(L)+ 39(E)+ 62(DL)	II

POLITECNICO OF MILANO							
faculty	department	degree	name	teaching	ects	hours	year
		MS		ARCHITECTURAL DESIGN, BUILDING TECHNOLOGY, INTERIOR DESIGN	12	56(L)+ 39(E)+ 62(DL)	II
		MS		INTERIOR DESIGN, HISTORY OF ARCHITECTURE, LANDSCAPE PRESERVATION	12	56(L)+ 39(E)+ 62(DL)	II
		MS		DIAGNOSIS OF HISTORIC STRUCTURES	4	29(L)+ 19(E)+ 12(DL)	II
		MS		HISTORY OF BUILDING TECHNICS	4	12(L)+ 18(E)+	II
		MS		MUSEOLOGY AND MUSEOGRAPHY	4	19(L)+ 23(E)	II
		MS		INTERIOR DESIGN IN HISTORICAL BUILDINGS	4	19(L)+ 23(E)	II
		MS		HISTORY OF ARCHITECTURE AND LANDSCAPE IN THE CONTEMPORARY AGE	6	33(L)+ 27(E)+	I
		MS	SUSTAINABLE ARCHITECTURE AND LANDSCAPE DESIGN (PIACENZA) Cod. 1085 (ENGLISH COURSES)	URBAN AND LANDSCAPE REGENERATION STUDIO Cod.097821 ENVIRONMENTAL TECHNOLOGY, LANDSCAPE AS HERITAGE, GENERAL ECOLOGY	14	56(L)+ 39(E)+ 62(DL)	I
		MS		ITALIAN TERRITORIES AND LANDSCAPE TRADITION	4	18(L)+ 22(E)	II
		MS	URBAN PLANNING AND POLICY DESIGN (MILANO) Cod. 1098 (ENGLISH COURSES)	URBAN AND PLANNING HISTORY	4	22(L)+ 18(E)	II
		MS		HISTORY OF ARCHITECTURE	6	32(L)+ 32(E)+	I
		MS	CORSO DI LAUREA IN BUILDING AND ARCHITECTURAL ENGINEERING (MI, LC) Curr. ARCHITECTURAL ENGINEERING Cod. 1095 (ENGLISH COURSES)	CONSERVATION STUDIO Cod. 099742 CONSERVATION STUDIO, CONSERVATION	9		I
		MS		REFURBISHMENT AND ENERGY RETROFIT + STUDIO Cod. 099763	12	40(L)+ 64(E)+ 60(LP)	II
		MS	CORSO DI LAUREA IN MANAGEMENT OF BUILT ENVIRONMENT – GESTIONE DEL COSTRUITO (MI) Curr. ECONOMIC Cod. 1096 (ENGLISH COURSES)	VALORISATION OF HISTORICAL BUILDINGS + VALORISATION OF CULTURAL HERITAGE Cod. 099823	12		I

POLITECNICO DI MILANO						
faculty	department	degree	name	teaching	ects	year
SCHOOL OF ARCHITECTURE, URBAN PLANNING AND BUILDING ENGINEERING	DEPARTMENT OF ARCHITECTURE AND URBAN STUDIES (DASTU)	SPEC	SCHOOL OF SPECIALIZATION IN CULTURAL HERITAGE AND LANDSCAPE	ARCHITECTURAL CONSERVATION 1	2	I
		SPEC		THEORY AND HISTORY OF CONSERVATION	4	I
		SPEC		ELEMENTS OF MODERN AESTHETICS HISTORY	2	I
		SPEC		METHODOLOGICAL ARCHITECTURE ANALYSIS FUNDAMENTALS Aims and methods of reading the built environment Tools and paths for analysis and diagnosis	2	I
		SPEC		CHEMISTRY APPLIED TO THE CONSERVATION OF MATERIALS	4	I
		SPEC		PHYSICS APPLIED TO THE CONSERVATION OF MATERIALS	4	I
		SPEC		GEOLOGY APPLIED TO THE CONSERVATION OF MATERIALS	2	I
		SPEC		PHYSICS APPLIED TO THE CONSERVATION OF THE ENVIRONMENT	4	I
		SPEC		MINERALOGY AND ARCHAEOLOGICAL METHODS	2	I
		SPEC		ART OF BUILDING TREATIES AND MANUALS	2	I
		SPEC		ARCHIVAL AND HISTORICAL CARTOGRAPHY	2	I
		SPEC		MUSEOLOGY	2	I
		SPEC		PROJECT EVALUATION AND ECONOMICS OF CULTURAL HERITAGE	4	I
		SPEC		THEORETICAL BASIS OF ESTIMATES	4	I
		SPEC		PROTECTION AND REFURBISHMENT OF HISTORIC CENTRES Urban Conservation Theory and techniques of intervention in the historical centres	4	I
		SPEC		INFORMATION SYSTEMS FOR THE MANAGEMENT OF THE CULTURAL HERITAGE AND LANDSCAPE	2	I
		SPEC		METHODOLOGY OF ARCHAEOLOGICAL EXCAVATION	2	I
		SPEC		CONSTRUCTIVE CHARACTERS OF HISTORICAL BUILDINGS	4	I
		SPEC		ARCHAEOLOGY AND ARCHAEOLOGY OF ELEVATIONS	4	I
		SPEC		ELEMENTS OF MEDIOEVAL AND MODERN ARCHAEOLOGY	4	I
		SPEC		ADVANCED TECHNIQUES OF ARCHITECTURAL SURVEY	4	I
		SPEC		ARCHITECTURAL CONSERVATION II	4	II
		SPEC		BAUFORSCHUNG, STAGE	2	II
		SPEC		DEGRADATION AND DIAGNOSIS OF REINFORCED CONCRETE	2	II



POLITECNICO DI MILANO

faculty	department	degree	name	teaching	ects	year
		SPEC		METHODOLOGICAL FUNDAMENTALS FOR THE ANALYSIS OF THE ARCHITECTURE	4	II
		SPEC		CHEMISTRY APPLIED TO THE CONSERVATION OF MATERIALS	4	II
		SPEC		PHYSICS APPLIED TO THE CONSERVATION OF MATERIALS	4	II
		SPEC		GEOLOGY APPLIED TO THE CONSERVATION OF MATERIALS	2	II
		SPEC		PHYSICS APPLIED TO THE CONSERVATION OF THE ENVIRONMENT	4	II
		SPEC		MINERALOGY AND ARCHAEOLOGICAL METHODS	2	II
		SPEC		ART OF BUILDING TREATIES AND MANUALS	2	II
		SPEC		ARCHIVAL AND HISTORICAL CARTOGRAPHY	2	II
		SPEC		MUSEOLOGY	2	II
		SPEC		PROJECT EVALUATION AND ECONOMICS OF CULTURAL HERITAGE	4	II
		SPEC		THEORETICAL BASIS OF ESTIMATES	4	II
		SPEC		PROTECTION AND REFURBISHMENT OF HISTORIC CENTRES Urban Conservation Theory and techniques of intervention in the historical centres	4	II
		SPEC		INFORMATION SYSTEMS FOR THE MANAGEMENT OF THE CULTURAL HERITAGE AND LANDSCAPE	2	II
		SPEC		METHODOLOGY OF ARCHAEOLOGICAL EXCAVATION	2	II
		SPEC		CONSTRUCTIVE CHARACTERS OF HISTORICAL BUILDINGS	4	II
		SPEC		ARCHAEOLOGY AND ARCHITECTURE OF ELEVATIONS	4	II
		SPEC		ELEMENTS OF MEDIOEVAL AND MODERN ARCHITECTURE	4	II
		SPEC		ADVANCED TECHNIQUES FOR ARCHITECTURAL SURVEY	4	II

PH.D., DOCTORATE: ARCHITECTURE, BUILT ENVIRONMENT AND CONSTRUCTION ENGINEERING

UNIVERSITY FEDERICO II OF NAPOLI							
faculty	department	degree	name	teaching	ects	hours	year
ARCHITECTURE	ARCHITECTURE (DIARC)	DC	Degree Corse IN SCIENCE OF ARCHITECTURE	HISTORY OF ARCHITECTURE 1	8	64	I
		DC		HISTORY OF ARCHITECTURE 2	8	64	II
		DC		ISTITUTION OF RESTORATION	6	48	III
		DC	Degree Corse IN TOWN PLANNING, LANDSCAPE AND ENVIRONMENT UPTA	THEORY AND HISTORY OF URBAN PLANNING History of modern town planning Theory of urban planning	12	90	I
ARCHITECTURE	ARCHITECTURE (DIARC)	MS	Master of Science Degree IN ARCHITECTURE Curriculum ARCHITECTURAL DESIGN	ARCHITECTURAL RESTORATION LABORATORY Restoration History of architecture	10	90	I
		MS		LABORATORY FOR ENVIRONMETAL SYSTEM DESIGN Technology Culturale heritage law	10	100	I
		MS		LABORATORY FOR MODERN ARCHITECTURE CONSERVATION Restoration Architectural and urban design	12	40	II
		MS	Master of Science Degree IN DESIGN FOR BUILT ENVIRONMENT	LABORATORY OF MUSEOGRAPHY Exhibit and Museography Conservation for historic architecture	12	120	II
		MSOC	Master of Science Degree One Cycle IN ARCHITECTURE	HISTORY OF CONTEMPORARY ARCHITECTURE HISTORY OF ART U0730	12	100	I
		MSOC		HISTORY OF ARCHITECTURE	8	64	II
		MSOC		HISTORY OF CITY AND LANDSCAPE	8	64	III
		MSOC		THEORY AND HISTORY OF CONSERVATION	6	48	IV
		MSOC		RESTORATION LABORATORY	8	80	IV



UNIVERSITY FEDERICO II OF NAPOLI								
faculty	degree	name	teaching	ects	hours	year		
ARCHITECTURE	SPEC	SCHOOL OF SPECIALIZATION IN CULTURAL HERITAGE AND LANDSCAPE	THEORY AND HISTORY OF CONSERVATION	4	60			
	SPEC		RESTORATION TECHNICS	5	50			
	SPEC		DETECTION FOR RESTORATION	5	50			
	SPEC		ARCHITECTURE AND LANDSCAPE	2	20			
	SPEC		HISTORY AND METHOD OF ARCHITECTURE	6	60			
	SPEC		GEOLOGY FOR CULTURALE HERITAGE	2	20			
	SPEC		STATIC AND STABILITY OF MASONRY STRUCTURES	5	50			
	SPEC		ENVIRONMENTAL ASSESMENT	6	60			
	SPEC		MUSEOLOGY	2	20			
	SPEC		FISICS FOR CULTURAL HERITAGE	2	20			
	SPEC		ARCHITECTONICAL RESTORATION LDESIGN	4	40	II		
	SPEC		URBAN CONSERVATION	4	40	II		
	SPEC		HISTORY OF MODERN ARCHITECTURE	6	60	II		
	SPEC		THEORY AND TECHNICS OF CONSERVATION IN HISTORIC CENTRES	2	20	II		
	SPEC		ARCHITECTURE AND LANDSCAPE 2	2	20	II		
	SPEC		INFORMATICS FOR CULTURAL HERITAGE AND LANDSCAPE	2	20	II		
	SPEC		STRUCTURES	5	50	II		
	SPEC		CULTURAL HERITAGE LAW	2	20	II		
	SPEC		ARCHITECTURAL DESIGN	5	50	II		
	SPEC		TECHNICAL IMPLANTS	2	30	II		
	SPEC		ARCHAEOLOGICAL ESCAVATION	2	20	II		
	PH.D., DOCTORATE IN ARCHITECTURE, ECTS 180							

SAPIENZA UNIVERSITY OF ROME

faculty	department	degree	name	teaching	ects	hours	year	
ARCHITECTURE	HISTORY, SURVEY AND RESTORATION (DSDRA)	DC	Degree Corse IN SCIENCE OF ARCHITECTURE (L-17)	HISTORY OF CONTEMPORARY ARCHITECTURE	8	100	I	
		DC		HISTORY OF ANCIENT AND MEDIOEVAL ARCHITECTURE	8	100	II	
		DC	Degree Corse IN SCIENCE OF ARCHITECTURE (L-17) Curr. Architecture	HISTORY OF MODERN ARCHITECTURE	8	100	III	
		DC		CARACTERS OF HISTORICAL BUILDINGS AND PROBLEMS OF CONSERVATION	8	100	III	
		DC		HISTORY OF MODERN ARCHITECTURE	8	100	III	
		DC	Degree Corse IN SCIENCE OF ARCHITECTURE (L-17)	RESTORATION OF GARDENS AND LANDSCAPE Curr. Landscape	8	100	III	
	MIBACT	DC	INDUSTRIAL DESIGN (1-4)	HISTORY AND THEORY OF CONTEMPORARY ART	6	48	I	
	HISTORY, SURVEY AND RESTORATION (DSDRA)	DC		HISTORY OF ARTS AND CRAFTS AND INDUSTRIAL DESIGN	6	48	II	
		DC	PROJECT MANAGEMENT (1-23)	HISTORY OF MODERN AND CONTEMPORARY ARCHITECTURE	8	64	I	
		DC		BUILDING REFURBISHMENT	8	48	II	
		DC		LANDSCAPE AND ENVIRONMENT DESIGN (1-21)	HISTORY OF TOWN AND LANDSCAPE (With University ofTuscia)	6	48	II
	ARCHITECTURE	HISTORY, SURVEY AND RESTORATION (DSDRA)	MS	LANDSCAPE DESIGN (LM-3)	LABORATORY FOR RESTORATION AND LANDSCAPE	9	72	1
			MS	ARCHITECTURE (CONSERVATION) LM4	MONUMENTS RESTORATION – LABORATORY	10	125	1
			MS		URBAN REDEVELOPMENT AND CULTURAL HERITAGE LAW	12	150	II
MS			MASONRY MATERIAL BEHAVIOR		6	75	II	
MIBACT		MS	CONSERVATION OF LANDSCAPE		6	75	II	
HISTORY, SURVEY AND RESTORATION (DSDRA)		MS	RESTORATION BUILDING SITE		6	75	II	
MIBACT		MS	RESTORATION LABORATORY	2	N.D.	II		
		MS	LABORATORY OF SCIENCE AND TECHNICS OF CONSTRUCTIONS	2	N.D.	II		

SAPIENZA UNIVERSITY OF ROME							
faculty	department	degree	name	teaching	ects	hours	year
		MS	ARCHITECTURE (CONSERVATION) – LM4 Curr. ARCHITECTURE english language	TOOLS AND METHODS FOR HISTORICAL RESEARCH (CONSERVATION)	8	100	I
		MS		STRUCTURAL ENGINEERING OF ANCIENT AND MODERN BUILDINGS	8	100	I
		MS		STRUCTURAL CONSOLIDATION AND HVAC PLANT IN HISTORICAL BUILDINGS Technical Systems Structural Reinforcement	12	150	I
		MS		THEORY AND PRACTICE OF CONSERVATION	6	75	I
		MS		TECHNOLOGICAL DESIGN FOR THE ARCHITECTURAL REQUALIFICATION	8	100	I
		MS		ARCHITECTURE (CONSERVATION) – LM4 Curr. ARCHITECTURE (CONSERVATION)	TOOLS AND METHODS FOR HISTORICAL RESEARCH	8	100
		MS	TECHNICS OF CONSTRUCTION FOR ANCIENT AND MODERN BUILDINGS		8	100	I
		MS	STRUCTURAL REINFORCEMENT FOR HISTORICAL BUILDINGS AND IMPLANTS		12	150	I
		MS	THEORY AND TECHINCS OF CONSERVATION		6	75	I
		MS	BUILDING REFURBISHMENT		8	100	I
ARCHITECTURE	HISTORY, SURVEY AND RESTORATION (DSDRA)	MSOC	ARCHITETURE LM 4		HISTORY OF CONTEMPORARY ARCHITECTURE	8	100
		MSOC		HISTORY OF ANCIENT AND MEDIOEVAL ARCHITECTURE	8	100	II
		MSOC		HISTORY OF MODERN ARCHITECTURE	8	100	III
		MSOC		ELEMENTS OF CONSERVATION	6	75	III
		MSOC		LABORATORY FOR RESTORATION	10	125	IV
		MSOC		BUILDING IN SEIMSMIC AREA	8	100	IV
		MSOC		MUSEOGRAPHY	8	100	V

SAPIENZA UNIVERSITY OF ROME					
faculty	degree	name	teaching	ects	year
Architecture	SPEC	SCHOOL OF SPECIALIZATION IN CULTURAL HERITAGE AND LANDSCAPE CURRICULUM A: RESTORATION OF CULTURAL HERITAGE AND LANDSCAPE	HISTORY OF ARCHITECTURAL TECHNICS		I
			FREE HAND SURVEY		I
			CONSERVATION OF MATERIALS AND CHEMICAL		I
			FINAL RESTORATION BUILDING SITE		I
			STRUCTURAL PROBLEMS FOR MONUMENTS AND HISTORICAL BUILDINGS		I
			CULTURAL HERITAGE LAW		I
			HEARTHQUAKE AND CULTURAL HERITAGE		I
			LANDSCAPE CONSERVATION		I
			PHYSICS FOR MONUMENTS		I
			DESIGN LABORATORY FOR RESTORATION		I
			MONUMENTS RESTORATION		II
			DETAILED STUDY OF HISTORY OF ARCHITECTURALTECHNICS		II
			EXECUTIVE DESIGN AND PROJECT MANAGEMENT FOR RESTORATION		II
			URBAN CONSERVATION		II
			REINFORCEMENT OF HISTORICAL BUILDING		II
			SEISMIC ACTION ON MASONRY AND STRUCTURAL ENHANCEMENT		II

SAPIENZA UNIVERSITY OF ROME					
faculty	degree	name	teaching	ects	year
			CULTURAL HERITAGE ECONOMY AND PROJECTS ASSESSMENT		II
			CALCULATION FOR RESTORATION PROJECT		II
			TECHNICAL IMPLANT		II
			ARCHAEOLOGICAL ESCAVATION		II
			HISTORY OF CONSERVATION		II
			HISTORY AND METHOD OF ARCHITECTURE		II
			MUSEOGRAPHY		II
			LIGHTING DESIGN AND IMPLANTS FOR MONUMENTS		II
			ARCHITECTURAL SURVEY		II
		SCHOOL OF SPECIALIZATION IN CULTURAL HERITAGE AND LANDSCAPE CURRICULUM B: RESTORATION OF PARKS, GARDENS AND LANDSCAPE	HISTORY OF GARDEN AND LANDSCAPE	8	I
			THEORY AND HISTORY OF CONSERVATION	8	I
			CONSERVATION OF HISTORICAL LANDSCAPE	8	II
			MORPHOLOGY AND MEANING OF GARDENS AND HISTORICAL PARKS	6	II
			GARDEN FUNITURE	6	II
			GREEN COMPONENTS	6	II
			REGULATIONS AND CHARTS FOR RESTORATION	6	II
			RESTORATION CONSTRUCTION SITE	8	II
PH.D., DOCTORATE IN HISTORY, SURVEY AND RESTORATION OV ARCHITECTURE, ECTS 180					

POLYTECHNIC UNIVERSITY OF TURIN							
faculty	department	degree	name	teaching	ects	hours	year
ARCHITECTURE	DEPARTMENT OF ARCHITECTURE AND DESIGN (DAD) SCHOOL OF ARCHITECTURE	DC	Degree Course IN ARCHITECTURE (Turin)	HISTORY OF CONTEMPORARY ARCHITECTURE	6	60	I
		MS		ATELIER: DESIGN AND HISTORY Design History of architecture and town	12	84(L)+ 36(E)	II
		DC		THEORY AND HISTORY OF CONSERVATION	6	80	II
		DC		HISTORY OF MODERN ARCHITECTURE	6	60	III
		DC		ATELIER: RESTORATION AND STRUCTURES Structural rehabilitation Conservation	12	84(L)+ 36(E)	III
		DC		HISTORY OF MEDIOEVAL ARCHITECTURE	6	60	III
		DC		HISTORY OF CONTEMPORARY ARCHITECTURE Course delivered in english	6	60	I
		DC		HISTORYANDDESIGNSTUDIO Architectural Design Architecture and city history Course delivered in english	12	120	II
		DC		RESTORATION THEORY, HISTORY AN TECNIQUE Coarse delivered in english	6	80	II
		DC		HISTORY OF EARLY MODERN ARCHITECTURE Course delivered in english	6	60	III
		DC	Degree Course IN DESIGN AND VISUAL COMUNICATION (Turin)	HISTORY 1 History of Contemporary architectare and Design 1 History of visual communication and Design 1	12	120	I
		DC		HISTORY2 History of contemporary architecture and Design II History of visual communication and Design II	12	120	I
		DC	Degree Course IN ENVIRONMENTAL PLANNING, URBAN AND LANDSCAPE PLANNING (Turin)	HISTORY OF TOWN PLANNING	6	48(L)+ 12(E)	I

POLYTECHNIC UNIVERSITY OF TURIN							
faculty	department	degree	name	teaching	ects	hours	year
ARCHITECTURE	DEPARTMENT OF ARCHITECTURE AND DESIGN (DAD) SCHOOL OF ARCHITECTURE	MS	Master of Science Degree IN ARCHITECTURE, CONSTRUCTION, CITY (Turin) In this course we have in same time english and italian teachings	HISTORY OF ARCHITECTURE	6	60	I
		MS		CONSERVATION	6	60	I
		MS		HISTORY OF GARDEN AND LANDSCAPES	6	60	II
		MS	Master of Science Degree IN ARCHITECTURE FOR SUSTAINABLE DESIGN (Turin) In this course we have in same time english and italian teachings	FACULTATIVE TEACHING OF HISTORY OF ARCHITECTURE/ DIGITAL HISTORY	8	60(L)+ 20(E)	I
		MS		ATELIER: COMPATIBILITY AND SUSTAINABILITY OF ARCHITECTURAL RESTORATION Conservation New technologies for survey and drawings	12	84(L)+ 36(E)	I
		MS		WORKSHOP „DIGITAL PHOTOGRAMMETRY AND 3D SCANS FOR THE SURVEY OF THE HERITAGE”	8	64(L)+ 16(E)	I
		MS	Master of Science Degree IN ARCHITECTURE FOR THE CONSERVATION AND THE VALORIZATION OF THE HERITAGE (Turin)	ANALYSIS AND VERIFICATION OF EXISTING STRUCTURES	8	48(L)+ 12(E)	I
		MS		HISTORY OF ARCHITECTURE AND TOWN	6	60	I
		MS	Master of Science Degree IN ARCHITECTURE FOR THE CONSERVATION AND THE VALORIZATION OF THE HERITAGE (Turin)	ATELIER: CONSERVATION DESIGN Conservation Science and technology of the materials for the restoration Enivornmental control techniques and equipment in buildings	18	130(L)+50(E)	I
		MS		URBAN SOCIOLOGY AND CULTURAL HERITAGE LEGISLATION	4	60	I
		MS		ATELIER: CONSERVATION AND VALORIZATION OF THE HERITAGE Urban and lanscape conservation Economic valorization	12	84(L)+ 36(E)	II
		MS	Master of Science Degree IN ARCHITECTURE FOR THE CONSERVATION AND THE VALORIZATION OF THE HERITAGE (Turin)	GIS AND DIGITAL MODELING FOR THE CULTURAL HERITAGE	8	60	II
		MS		URBAN HISTORY AND DIGITAL URBAN HISTORY	6	19(L)+ 23(E)	II
		MS		WORKSHOP „DIGITAL PHOTOGRAMMETRY AND 3D SCANS FOR THE SURVEY OF THE HERITAGE”	8	64(L)+ 16(E)	II
		MS		WORKSHOP „LIGHTING PROJECT”	8		II

POLYTECHNIC UNIVERSITY OF TURIN

faculty	department	degree	name	teaching	ects	hours	year
		MS	Degree Course IN ENVIRONMENTAL PLANNING, URBAN AND LANDSCAPE PLANNING (Turin)	TERRITORIAL HERITAGE HISTORY AND CRITICISM	6	60	I
		MS		WORKSHOP DIGITAL PHOTOGRAMMETRY AND 3D SCANS FOR THE SURVEY OF THE HERITAGE	8	64(L)+ 16(E)	I
		MS	Master of Science Degree IN PLANNING OF GREEN AREAS AND LANDSCAPING Interateneo (Università di Genova – DSA Università di Torino – DISAF Politecnico di Torino – DIST Università di Milano Facoltà di Agraria)	LABORATORY FOR THE RESTORATION OF THE GARDENS AND LANDSCAPE Conservation of gardens Hydraulic engineering of historic gardens Pathology and rehabilitation of historic plants	12	96	II

POLYTECHNIC UNIVERSITY OF TURIN								
faculty	department	degree	name	teaching	ects	hours	year	
ARCHITETTURA	DEPARTMENT OF ARCHITECTURE AND DESIGN (DAD) SCHOOL OF ARCHITECTURE	SPEC	SPECIALIZATION IN ARCHITECTURAL AND LANDSCAPE HERITAGE	ARCHITECTURAL CONSERVATION 1	4	16	I	
		SPEC		HISTORY History of architecture History and methods of analysis and architecture History of town planning	8	32	I	
		SPEC		ARCHITECTURAL AND TERRITORIAL REPRESENTATION/GIS Representation of the land and the environment Territorial and landscape analysis and planning	5	40	I	
		SPEC		DEGRADATION OF MATERIALS/HISTORIC BUILDING TECHNOLOGY	4	16	I	
		SPEC		STRUCTURAL SYSTEMS TECHNOLOGIES/ CONSOLIDATION	4	16	I	
		SPEC		ECONOMICS AND LAW Economic valuation Legislation and management of cultural heritage	3	24	I	
		SPEC		EQUIPMENT, INSTALLATION, MUSEOGRAPHY Information processing systems/cataloging Techniques of evaluation and control of the built environment	4	32	I	
		SPEC		METHODOLOGIES FOR THE ARCHEOLOGICAL SURVEY	4	16	I	
		SPEC		ATELIER I year	8	32	I	
		SPEC		CONSTRUCTION SITES, SITE VISITS, GUIDED TOURS 1 year	2	16	I	
		SPEC		STUDY DAYS AND CONFERENCES	2	16	I	
		SPEC		SPECIALIZATION IN ARCHITECTURAL AND LANDSCAPE HERITAGE	ARCHITECTURAL CONSERVATION II	8	32	II
		SPEC			HISTORY History of architectural criticism and literature History of the city and environment	4	16	II
		SPEC	TOOLS FOR THE ANALYSIS AND THE DESIGN OF LANDSCAPE		8	32	II	
		SPEC	CONSERVATION OF MATERIALS IN HISTORIC BUILDINGS		4	16	II	



POLYTECHNIC UNIVERSITY OF TURIN

faculty	department	degree	name	teaching	ects	hours	year
		SPEC		TECHNOLOGIES OF STRUTURAL SYSTEMS II	4	16	II
		SPEC		ECONOMICS AND LAW Environmental economics and estimates New paradigms and instruments for the managment of bio-cultural landscape (Unesco Chair) Course delivered in english	3	24	II
		SPEC		TECHNOLOGIES FOR THE EQUIPMENTS	4	16	II
		SPEC		ATELIER II year	16	64	II
		SPEC		CONSTRUCTION SITES, SITE VISITES, GUIDED TOURS Iyear	1	8	II
		SPEC		STUDY DAYS AND CONFERENCES	1	8	II
		SPEC		TRAINEESHIP, STAGE	4	120	II
Ph.D.,DOCTORATE, ARCHITECTURE, HISTORY AND DESIGN							

3.2. CHARACTERIZE THE FORM AND THE SCOPE OF CONTACT WITH THE PRACTICE OF HERITAGE PROTECTION AND REVITALISATION OF HISTORICAL CITIES PROVIDED IN THE CURRICULA AT THE FACULTIES OF ARCHITECTURE

[e.g. summer internship for students, placements for students in design offices and companies, involvement in the projects, study visits, summer schools]

Make the critical assessment of these actions – their form and usefulness in teaching process

The Faculties of Architecture in Italy offer students activities designed to make a link between the study of architecture and practical activity.

We will analyze the activities proposed by 7 Faculties chosen as examples to describe the context of the Italian universities.

NAPLES, UNIVERSITY “FEDERICO II”

1st cycle – Degree:

Architectural Sciences

As well as seminars to be chosen by the student, which serve to characterize the study plan, and through which mature the so-called extra credits (“Attività a crediti Liberi”), in the Degree Course in Science of Architecture at the University of Naples Federico II are offered Traineeships and travel for students.

Traineeship (“Tirocinio”):

The Degree Course in Science of Architecture provides for a mandatory curricular Traineeship that should be done no earlier than the third year of the course.

The Traineeship requires 75 hours of activity of 3ECTS and can be done within a period of not less than one month and not more than three months.

The student can choose between the following types of Traineeship (A1), (A2), (B), (C):

A) “Tirocinio Extramoenia

A1 – “Tirocinio Extramoenia” to be held at Public agencies and Institutions affiliated with the University such as Municipalities and Ministries

A2 – “Tirocinio Extramoenia” to be held at private entities such as professional and service offices and societies, companies or associations affiliated with the University

The “Tirocinio Extramoenia” requires either the formulation of an educational project appropriate to the number of credits provided by the Course and to the respective working hours, and the choice of two tutors: one inside the University (that will be assigned at the time of the proposed Traineeship in the first activation

meeting with Traineeship Committee) and one inside the host structure.

B) “Tirocinio Intramoenia” takes place at the facilities of the University Federico II on specific activities (academic research on applicative character, activities for third parties, conventions) coordinated by one or more teachers, who presented an educational project and indicated a tutor.

C) “Tirocinio Interno” to be held at the facilities of the University Federico II on any offers of Traineeship.

To activate a Traineeship it is necessary the structure that hosts the student has an agreement with the University Federico II. The list of companies and affiliated organizations is available online. The agreement with the structure can be enabled, check the requirements, even after students’ proposals.

Having regard to the mode of participation at the “Attività a crediti liberi” (seminars chosen by the students) and how to activate of the Traineeship, we can observe how the student can, as early as the first cycle of studies, decide to steer his training toward the subject of the protection and preservation of the historical heritage.

The Faculty of Architecture of the University Federico II of Naples also promotes trips for students enrolled, but tours offered often concern the deepening of modern and contemporary architecture.

2nd cycle –Master Degree:

Master Degree in Architecture – Architectural Design

In the two-year course of Master Degree are activities chosen by the student; this can choose to attend “Attività a crediti liberi” or a Traineeship.

“Attività a crediti liberi”: Activities in free credits allow to acquire, depending on their duration, 1ECTS, 2 ECTS, or 3 credits.

Traineeship (“Tirocinio”): the types of Traineeship and how to enable are the same ones identified for Traineeships offered for first cycle Degree Course in Architecture. The Traineeship planned for the Master Degree provide 100 hours of activity amounted to 4 credits; can be done within a period of not less than one month and not more than three months.

Master Degree in Architecture – Five-year (in single cycle)

During the five-year Master Degree (in single cycle) program includes activities in the student’s choice.

Types of activities:

Planned activities: The DiARC – Department of Architecture of the University of Naples Federico II programs seminars and conferences in which the student can choose to participate.

**Unplanned activities:**

- **Activities promoted and coordinated by the teachers:** are activities of various types, visits to construction sites, visits to exhibitions, site visits, workshops, study tours, seminars, conferences, lectio, in-depth modules of the official courses.
- **Workshops and other practical/operational activities** (visits to construction sites, visiting exhibitions, site visits, workshops, study tours, etc.)
 - recognition of maximum 4 ECTS
 - 1 ECTS =15 hours of activity
 - the remaining 25 hours to complete the total hourly fee for each individual processing ECTS is dedicated to (agreed with the lecturer) and provides a final check that may consist of delivery of final works and discussion of reports and graphs
 - daily activity may not exceed 9 hours.
- **“Attività frontali”** seminars, conferences, lectio, in-depth modules of the official courses etc.)

Free Activities: the student may agree with a Tutor he contacted and proposing to the co-ordinator Course of in-depth individual program on topics of interest in architecture (conferences, seminars, book presentations, presentation of research, workshops, study tours, exhibitions, etc.)

External certified activities: certificates of language, computer courses, courses on security (1CFU)

Traineeship (“Tirocinio”): the five-year Master Degree (in single cycle) provides for a compulsory Internship 6 ECTS to play not before the fifth year of the course as required by the curriculum. The subjects which can accommodate Traineeship are: Public administrations, institutions, “Soprintendenze”, ministries, companies, businesses, professional and service offices and societies, associations or structures of the University Federico II. Also in this case the Traineeship can be External or Internal (**“Extramoenia o Intramoenia”**) depending on whether the host organization is external or internal to the University. The Traineeship can be done abroad.

Workshops

The DiARC – Department of Architecture of the University of Naples Federico II, sponsors and promotes student participation in workshops focusing on different themes of architecture. Depending on the level of knowledge required workshops are targeted at students in Degree Programs, Master’s Degree Programs, two-year or single cycle.

Are some workshops held at the Faculty of Architecture of the University Federico II of Naples concerning the issues of heritage protection, conservation and restoration of architecture:

International Workshop: URBAN REGENERATION AND ENVIRONMENTAL DESIGN IN THE MEDITERRANEAN TOWN

The topics of the workshop will focus on urban redevelopment in the historic center of Naples tackled environmental and urban scale, the neighborhood and the building in terms of redevelopment of urban areas in relation to settlement and aspects to environmental hazards. Will be considered lots and urban voids to control widespread sustainable development, including through the proposition of open spaces equipped with innovative proposals of systems and/or services, and the conversion and the ecodesign of unused buildings or particularly degraded.

International Design Workshop: PAUSILYPON, ARCHITECTURE AND ARCHAEOLOGICAL LANDSCAPE

Theme of the workshop site landscape enhancement Pausilypon organized by “Accademia Adrianea di Architettura e Archeologia” in collaboration with DiARC. The redevelopment of open spaces, provision of services and facilities for visitors, the study of temporary installations and protection to qualify the visit paths, are some of the themes that will be addressed to contend on the relationship between the architecture and the archaeological site.

MILAN, POLITECNICO**SCHOOL OF ARCHITECTURE, PLANNING, ENGINEERING, CONSTRUCTION****1st cycle – Degree, 2nd cycle – Master Degree****Traineeship (“Tirocinio”):**

The School of Architecture and Construction Engineering of Politecnico di Milano provides for mandatory Traineeship to implement the credit plan. Students can also activate in addition one or more optional, up to a maximum of one year at each hosting institution, but that does not contribute to the acquisition of supplementary credits. Such training must be completed prior to the discussion of the thesis.

The School enables the mandatory Traineeship: -in the second year (second semester) and in the third year of the Degrees; -in the first or second year of Master’s Degree programs.

Credits to be captured by the Traineeship vary according to different degrees and are defined within the different “Manifesti degli Studi”.

To obtain the ECTS required for the mandatory Traineeship the student can perform:

- **External Traineeship**, in Italy or abroad; the Traineeship can be carried out at public institutions, companies, studios (architecture, urbanism, landscape, engineering, etc.). Students can then choose where to apply his knowledge in practice from the first cycle of studies.

Practical Internal Training (Internal Traineeship), activity promoted by a professor that has as its subject a student's involvement exclusively in research to be carried out at a Department of Politecnico di Milano. The availability of practical activities is in flux; the student turning to a

- Professor as a reference, will choose the field on which to focus his practical activity.
- **A workshop or a vocational course** subject to the approval of the Board of the School (“Giunta della Scuola”). The workshops accredited by the School, that recognize academic credits in the framework of the training course, are continuously updated. Here are some workshops that deal with the theme of restoration and conservation of the architectural heritage: INTERNATIONAL WORKSHOP ON THE CONSERVATION AND MUSEALIZATION OF THE WORLD HERITAGE SITE OF BEIT She'arim (150 hours, reserved for students of master's degree); Heritage-Led Design Workshop – Xi'an China 2017 (100 hours + 184 hours in China, reserved for students of Master's Degree)

Workshops

The workshops, accredited by the School recognize credits.

The credits earned through attendance at a workshop can: a) replace elective courses chosen by the student activities; b) validate codes activated as “Workshop” and integrated into the curriculum.

TURIN, POLITECNICO

The Politecnico of Turin gives students the opportunity to activate an intern, evaluated in credits, where foreseen by the course of studies.

Post-graduate Traineeships are activated within 12 months of graduation and for a maximum period of 6 months.

1st cycle – Corsi di Laurea:

Degree in Architecture

The “Manifesto degli Studi” of the Degree in Architecture at the Politecnico di Torino provides training activities, chosen by the student. The student will acquire a total of 12 ECTS called “Free Credits” choosing whether to play: -educational activities outside the Ateneo (6 ECTS); Internship (12 ECTS); the teachings offered by the University's catalog (12 ECTS); Research essay (6 ECTS).

Educational activities outside the University:

- teachings at Degree Courses in other Universities or Courses of Study,
- workshops

- other activities (activities that provide professional training credits, (the Italian definition is CFP); foreign language training; computer modeling courses; training courses organised by public or private insitutions; design competitions for students; a series of lectures held within the University)

Traineeship (“Tirocinio”): The learner can perform an internship at a professional firm or other public or private entity proposed by the Office Stage&Job of the Politecnico di Torino, at a studio or other public or private entity selected by the student himself, after entering the list drawn up by the Office Stage&Job and after verification of eligibility requirements.

2nd cycle – Corsi di Laurea Magistrale

Master Degree in Architecture, Building, Cities

Are planned, even during the two-year Master's Degree program, “Free Credits” for training activities chosen by the student (8 ECTS). The student can choose to achieve them doing: – a critical historical research essay (4 ECTS); – “Third Unit” of Project or attending a further design studios (14 credits); -introductory workshop (3 ECTS); -educational activities outside the University (8 credits); -professionalizing workshop (8 ECTS).

Introductory workshop: the faculty offers several workshops that address different issues. In the list of courses for the year 2016/2017 we find a workshop that addresses the issue of preservation called it: “The practice of architectural restoration, from diagnosis to restoration.” The workshop aims to deepen the degradation of building materials and their approaches to the restoration thereof, focusing in particular on the practical aspects of application, in terms of diagnosis, both at the level of intervention of structural reinforcement and restoration of surfaces. The workshop is organized through a series of lectures, visits and field exercises, conducted with a range of professionals who work in the field of restoration and conservation of cultural heritage and offering students a chance to get in direct contact with the practical application and issues with aspects of operations of restoration.

Professionalizing workshops: in the list of proposals for the year 2016/2017 we find: “Digital photogrammetry and 3d scans for the relief of cultural heritage”. The workshop aims to present a panorama of the most up to date digital methodologies for the detection and the metric representation of cultural heritage, mainly terrestrial laser scanning technique digital photogrammetry, integrated and preventive use in an application that shows the employment opportunity. The course is to acquire skills in the point cloud processing and generation of 3D models continues, characterized by nature and multi-scale resolution.

Extra-curricular Workshops

The student has the opportunity to acquire the credits provided for “Educational Activities Outside



the University” with extra-curricular workshops. Among those enabled by the year 2016/2017 we find, in the field of heritage conservation, one entitled: “Engineers, City, Fortifications (16th–18th centuries), understanding and appreciation of the fortified circuits (3 ECTS)”. The fortifications were elements of influence the structure of the city and territory: the design of European cities is still strongly influenced by the walls built between the middle ages and the modern age. The city had to “adapt” to the demands of the war and, often, the decisions taken for military reasons are still visible within the layers and complexities of the contemporary city. The objective of the workshop is to build a path of knowledge between consolidated bibliography, archival inquiries, inspections, to the analysis of case studies recently restored or still awaiting exploitation.

“Tesi in azienda”, Post-Graduate Traineeship, Job Placements and Career Counseling

The Politecnico di Torino helps students facing in the workplace by offering different services. Students can request to process the thesis, first cycle and second cycle at a company. Agreements between the University and some companies are expected for Post-Graduate Traineeship; they are paid a minimal fee of 300 euros per month for a maximum of 20 hours per week. Job Placement Service offers to graduate jobs in Italy and abroad, company presentations at University and career days and vocational guidance.

FLORENCE, UNIVERSITÀ DEGLI STUDI

1st cycle – Degree:

Degree in Architectural Science

Traineeship (“Tirocinio”): the University of Florence for students enrolled in the Degree Course of Science of the Architecture provides, in the third year of studies, obtaining 5 ECTS through a Traineeship to be held at facilities outside the University as professional firms, companies, public and private, productive structures. The Traineeship can be replaced by alternative activities such as competitions open to students, seminars, workshops or international experiences linked to exchange projects and student mobility. The University offers partner companies at which enable the internship, but the student can still propose different solutions that will need to be assessed by the University. Students can activate the same procedures to perform an internship abroad.

Seminars: the student can ripen 12 ECTS foreseen for activities “In choice of students” attending the seminars enabled each year by teachers. They are activated by the Faculty seminars on themes of conservation (“The historic town between tradition and innovation. Surveying, con-

servation, valorization “12 ECTS,” Preservation and structural safety of the built heritage. Brick architecture, on Earth and in traditional materials “8 ECTS). The student can decide also whether mature 12 ECTS claiming exams not expected from its curriculum.

2nd cycle –Master Degree:

Master Degree in Architecture – Architectural Design

Traineeship (“Tirocinio”): for the Master Degree in Architecture Design credits are provided by mature doing Traineeship (6 ECTS). Even in this case, however, the credits can be attributed through the conduct of other equivalent activities such as contests, reserved for students or in the form of collaboration with professional studies, seminars, workshops. The internship can be connected to the Master Thesis are planning a research project supported by businesses or design company.

Seminars: are planned in the curriculum of the Degree Course in Architecture tasks “on student choice” for total of 12 credits. The student can decide also whether mature 12 ECTS claiming exams not expected from its curriculum.

Master Degree in Architecture – Five-year (in single cycle)

Also for the five-year Master Degree (in single cycle) Programare scheduled tasks “on student choice” and an internship, the first for a total of 20 ECTS

and the second to 8 ECTS acquirable through the same conditions as those Degree and Master’s Degree programs.

Extracurricular Traineeship, Workshops e Summer School

The University of Florence facilitates the students ‘ approach to employment and promotes practical extracurricular activities.

You can play an extra-curricular Internship in a company, a professional firm or a private or public entity if an agreement with the University. The internship provides for a minimum wage of 500 euros. It is activated within 12 months of graduation and for a maximum period of 6 months.

The workshops are seminars and/or study, aimed at learning about specific topics, through brief project experiences and can be arranged from teachers, from schools or other institutions not only college girls. The University and the Department of Architecture promotes workshops on the theme of conservation and restoration.

Active international partnerships with other universities and University offers students the opportunity to participate in Summer School, however no usable travel-study on issues of patrimony.



CAMERINO, UNIVERSITÀ DEGLI STUDI

1st cycle – Degree:

Degree in Architectural Science

Training activities chosen by the student: in the Degree Course in Science of Architecture of the University of Camerino 12 CREDITS that the student will accrue by participating in “Structured Activities”, such as extracurricular lessons (enabled at the school of architecture and Design, or other schools of the university or other national or foreign Universities), courses, seminars, workshops organized by or in cooperation with institutes and University departments or research institutes, or “Unstructured Activities such as field trips, competitions, visits to museums, exhibitions, fairs, and participation in conferences.

2nd cycle –Master Degree

Master Degree in Architecture

Training activities chosen by the student: in the period of active Master's Degree Program at the University of Camerino are 8 credits that the student can achieve doing “Structured Activities” and “Unstructured Activities”.

Traineeship (“Tirocinio”): there will be a second-year Master's Degree Program in Architecture 12 ECTS intended for training activities. The training course consists of a period of training carried out by the student in the University, or enclosures, although rarely, within structures of the University, only when engaged in practical application and agreements or contracts that are compatible with the path the student's curriculum. Every year in June, for the next Academic Year, it instituted a ban in the form of “Call”-addressed to companies and professional structures from at least 5 provincial territorial areas, who want to apply to host interns at its facilities.

Stage and Placement

The University of Camerino facilitates the entry of his students into work collecting and offering jobs to students in days. It is also a service of career guidance.

ROME, UNIVERSITÀ DEGLI STUDI LA SAPIENZA

1st cycle – Degree:

Degree in Architectural Science

Training activities chosen by the student: the Degree Course in Architecture at the University of Rome La Sapienza provides that the student should accrue 12 ECTS over three years by choosing among the courses offered by the University. The learner can, however, choose teachings from those of other undergraduate and graduate courses activated in the Faculty, other than those provided for in its curriculum.

Traineeship (“Tirocinio”): delivering, in the third year, by 2 ECTS about Traineeship or other training ac-

tivities can be achieved as well as a training course practical insights, enabled by the Faculty through workshops, seminars, institutional courses (at institutions and universities in Italy and abroad, of which may be required for recognition). The certificates will also be allowed to acquire computer skills or knowledge of a second language.

2nd cycle –Master Degree:

Master Degree in Architecture (Restoration)

Training activities chosen by the student: the student may choose, within the framework of courses in La Sapienza, a number of credits equal to 8.

Master Degree in Architecture – Five-year (in single cycle)

Training activities chosen by the student: 20 ECTS overall are expected to be chosen by the student. The student will formulate its selection among the teachings offered by the Master Degree Course, thus defining their education. The student may also choose courses at a different Faculty, after authorization by the Commission.

Internships and Stage

La Sapienza promotes and supports educational and vocational training activities in Italy and abroad for 18 months from enrolled students as well as graduates within the graduation. The purpose of the service is to accompany young people into the labour market and give companies and institutions accredited to the system www.jobsoul.it useful tools for finding qualified personnel. Soul (University Orientation System Work) was established by the agreement between Sapienza University of Rome, University of Roma Tre, Università degli Studi di Roma Tor Vergata University of Rome Foro Italico, Academy of Fine Arts, University of Cassino, University of Tuscia – Viterbo and LUMSA – Libera Università degli Studi Maria SS. Assunta of Roma. The service, provided by the portal JobSOUL, operates as a node in the network of public employment services in collaboration with other institutions, and with the main agencies involved in the implementation of measures in favour of young university students. In particular SOUL works through an advanced platform and a series of career guidance services.

Workshop (Bandi, Concorsi)

The School of Architecture of the University La Sapienza of Rome sponsors and promotes many activities.

In the field of conservation and restoration of the heritage workshop are activated, published tenders for the award of scholarships, advertised competitions and events and Summer programs.

Here are some examples of activities which took place in the last period, or still under way, at the Faculty of architecture at La Sapienza:

**First International Conference on Architecture, Urban Planning and Restoration. International Workshop on “Cities: the Future of the Past”**

Subject: The Architecture involves combining with the different sciences such as engineering, designing, psychology, sociology which has been inspired and transmitted from the countries to others, then, bridged them together and considered as the interaction and relations among the countries all over the world. In this regard, Hakhamanesh Pars Studies and Communication Institute (HPSCI) by the capacities of Iran's architecture and Italian architecture that is pioneer in this field, will organize the First International Conference on Architecture, Urban Planning & Restoration (19th January 2017) and Workshop on Cities: The Future of the Past (20th–21st January 2017) in cooperation with La Sapienza University, Islamic Azad University, Damghan branch as well as other institutions and academic centers in La Sapienza University of Rome, Italy on October 19th–21st 2017. We proudly invite scientific explorers, Professors, Students and researchers to attend in this event.

International Design Workshop for the city of Viterbo. The project of the Centre

Subject: The workshop is part of the agreement signed between the DiAP (Dipartimento di Architettura e Progetto) and the City of Viterbo for designing the masterplan for the historic center of the city. The masterplan aims to enhance the historic core of the city at the municipal scale as well as at the territorial scale. In fact, Tuscia is an area of great qualities and potential in which Viterbo should aspire to become the main attractive polarity. In this frame, the workshop will be the main instrument to test, at the architectural scale, some of the strategic urban assumptions drowned up by the masterplan. The themes will concern five strategic areas identified in the masterplan, situated along the path of the city walls, to redraw the boundary line between the historic city and the modern city.

Scholarship Announcement San Gemini

Subject: call for applications for the award of scholarships for university students aimed at the acquisition of items and useful techniques for conservation and restoration of cultural heritage, as the excavation and cataloguing of archaeological finds, to be carried out under the programme in 2016 „San Gemini Preservation Studies.

CATANIA, UNIVERSITÀ DEGLI STUDI**2nd cycle –Master Degree:****Master Degree in Architecture – Five-year (in single cycle)**

Training activities chosen by the student: the five-year Master Degree (in single cycle) Program of the University of Catania provides a total of 20 ECTS from

the second year for “Subjects chosen by the student.” The choice can be made within the academic offer of the University and in the context of elective modules present in the training offer proposed by the SDS Special Architecture teaching structure of Syracuse.

Workshops, Announcements, Contests

The SDS Architecture organizes workshops, announcements, contests and trips that can be taken by students and contribute to the achievement of 20 ECTS „Subjects chosen by the student”.

Workshop CULTURA CREA, tourist and cultural heritage which Favorices development opportunities.

The Ministry of cultural heritage and tourism (MiBACT) and Syracuse in a special workshop will illustrate the Invitalia three lines of action that articulates the culture programme CULTURA CREA, for the birth and growth of micro, small and medium enterprises, also in the third sector, cultural sector in regions Basilicata, Calabria, Campania, Puglia and Sicily.

Educational and experimental construction site. Masonry restoration and reconstruction.**International Workshop of Architecture. Designing heritage tourism landscapes. Presso I.U.A.V. Venezia.**

Traineeship (“Tirocinio”): are planned for internships and placements in enterprises, public or private entities, professional associations required activities for 8 credits.

3.3. PRESENT THE ALUMNUS PROFILE DESCRIBED IN THE DOCUMENTS OF STUDY PROGRAMME IN FIELD OF ARCHITECTURE IN THE SCOPE RELATING TO HERITAGE PROTECTION AND URBAN REGENERATION

Make a critical assessment of this profile.

The student, who decide begin a study in architecture in Italy, must pass an examination for access to the faculty. Generally, the student hasn't a particular profile, but is preferred who have a diploma from “liceo classico, scientifico, o altro diploma di scuola secondaria”.

Generally, the examination is fixed in a day for all country, but some time has been in different date, and this has permitted to the student different possibility.

Then the student can enter in some different courses, but the possibilities for changing is possible.

Architecture studies require a high work capacity, and generally all program are presented some month before in some days (open door in university), where the docent presence the different courses.

The student character must have: interpersonal skills for teamwork, qualities for organization and planning, graphical ability not only instruments but natural with ancient and traditional system.

There are important interest in cultural heritage, critical thinking, synthesis capacity, mechanical intuition, and in general a curiosity and interest in world in which we live,... in the sense of historical development. It requires a willingness to study, research in different library, in historic and ancient archivium the knowledge in Humanities, social and technological sciences.

3.4. CHARACTERIZE THE CURRICULUM (AS A WHOLE) FROM THE POINT OF VIEW OF ITS SUBSTANTIVE CONTENT AND STRUCTURE (CONSISTENCY AND COMPLETENESS OF THE PRESENTED ISSUES, PROPER ORDER, COMPATIBILITY WITH OTHER COURSES)

Make a critical assessment of the program.

The Changing society in the last period influences the conservation? Yes, because is fundamental the knowledge and examination of the basis precepts of heritage conservation. Under the general heading of human coexistence with the land and memory different themes are identified:

Movement of peoples' nomadism, migration, settlement modes of subsistence, technological evolution, under the general heading of human beings in society, three themes are identified: human interaction, cultural coexistence, spirituality and creative expression.

For this reason, is necessary the study of particular curriculum in architectonic conservation and restoration of our past, because no future without memory, especially in our Europe.

In Italy, in all the faculties of architecture is obligatory the conservation program, and the exam of restoration is necessary for the degree. But now we have the semester, and generally for this reason isn't good.

In UE course: Laurea Magistrale a ciclo unico.

The student during the first and second year studies the history of architecture, survey, design, and technical and static.

For this reason in UE course, the students begin from III year, with Elements of restoration, where the course has incentred from History and theory, with the survey for practical experience,... and then IV year continues with Laboratory of restoration for arriving to a project in conservation with restoration, new use, design for museum or liturgical adaptation or urban conservation...

In Architectural Conservation the program combines compulsory and optional courses, and is assessed through individual papers, group project and presentations, and report writing: culminating in a supervised dissertation.

The approach for conservation is a full immersion with a direct for a complete training, 3+2.

3.5. PRESENT A PROPOSAL FOR A MODEL CURRICULUM IN THE FIELD OF HERITAGE PROTECTION AND REVITALIZATION OF HISTORICAL TOWNS

Separately specify a model programme in the field of architecture (when it is not a specialty in the field of revitalization of historical towns) and a model programme of specialty in field of revitalization.

[list of curses, structure and sequence of these courses, the content of the courses, the scope and form of contact with practice]

A proposal for a model curriculum in the field of heritage protection and revitalization of historical towns, may be:

a revision of Bologna process European High Education Area, and give the new guidelines for our Europe.

ARCHITECTURE (CONSERVATION)

FIRST MODULE			
Denomination		ects	Hours
DESIGN STUDIO I		10	125
TOOLS AND METHODS FOR HISTORICAL RESEARCH. CRITERIA		8	100
STRUCTURAL ENGINEERING OF ANCIENT AND MODERN BUILDINGS		8	100
ARCHITECTURAL SURVEY		8	100
SECOND MODULE			
Denomination		ects	Hours
STRUCTURAL CONSOLIDATION, HEATING VENTILATION AND AIRCONDITIONINGPLANT OF HISTORICAL BUILDINGS			
– Technical systems in historical buildings		6	75
– Structural reinforcementofhistorical buildings		6	75
OPTIONAL GROUP			
TECHNOLOGICAL DESIGN FOR THE ARCHITECTURAL		8	100
REQUALIFICATION			
THIRD MODULE			
Denomination		ects	Hours
CONSERVATION DESIGN STUDIO		10	125
URBAN REGENERATION AND CULTURAL HERITAGE REGULATORY			
FRAMEWORK			
– Rehabilitation and urban regeneration-Studio		4	50
– Town planning and cultural heritage regulatory framework		8	100
FOURTH MODULE			
Denomination		ects	Hours
DESIGN STUDIO 2		8	125
CONSERVATION DESIGN STUDIO		10	125
URBAN MORPHOLOGY AND PROFESSIONAL PRACTICE		4	50
– Urban morphology		4	50
– Professional practice and economic asesments			
OPTIONAL GROUP			
TEACHING STUDENT CHOICE			
Students must choose one optional exam with at least 8credits (CFU). In the latter case, students are obliged to obtain specific authorization which will be released on behalf of a motivated request. In the latter case, students are obliged to obtain specific authorization which will be released on behalf of a motivated request.		8	100
INTERNSHIP-WORKSHOP		2	
FINALTEST		12	180

PROGRAM:

DESIGN STUDIO I

The course objective is to achieve, within the educational process of students, an overall and articulated experience in which converge the components of architecture disciplinary process. In addition to the essential morphological, technological, constructive and typological in-depth examinations, the course aims to take into account all the data concerning urban settings included construction in historical centers. The project issues, located in the urban fabric, will be therefore preferably analyzed and taken as case studies.

TOOLS AND METHODS FOR HISTORICAL RESEARCH. CRITERIA

The course aims to provide students basic methodology of bibliographic, archivist and direct research for what concern written and constructive "sources" in order to retrace the history of architectural phases of single building or urban areas aiming to the conservation and protection of historical architectural heritage.

STRUCTURAL ENGINEERING OF ANCIENT AND MODERN BUILDING

The main purpose of the course is to put in position the students, in order to know how to interpret the mechanical behavior of existing buildings (ancient and modern) and related materials under gravity and seismic stresses. The course also provides knowledge to the assessment of structural and reinforcing interventions while respecting the principles of restoration.

ARCHITECTURAL SURVEY

The course provides students with the base and advanced knowledge about the role of architectural survey within the process of understanding of the environment and the architecture. Furthermore, it highlights the aspects of interpretation, compared with the project representation, with the 'reading' of historical buildings, with the mapping of the constituent materials and macroscopic forms of deterioration in order to evaluate the state of conservation of architectural structures. The course also makes specific reference to the latest automatic survey technology and georeferenced.

STRUCTURAL CONSOLIDATION AND HVAC PLANT IN HISTORICAL BUILDINGS

The course aims to develop the capability to design the structural and functional recovery of historical and modern buildings developing the issues of structural safety and plant design with the purpose of conservation and enhancement of existing capacities.

- Structural reinforcement of historical buildings:

This part of the course aims to develop a critical knowledge for the statement of opinion concerning the structural status of conservation of an existing building. Furthermore, the course gives instruments for the interpretation of structural reinforcement interventions, calibrated in accordance with the limitations of the "boundary conditions" of the problem.

- Technical systems in historical buildings:

The course aims to focus the role of cooling, electrical, acoustic, lighting systems and renewable energy in buildings, in terms of the maximum design, installation and maintenance. In particular it will deal with peculiar plant aspects, as well as residential construction, historical buildings, museums and hospitals.

THEORY AND PRACTICE OF CONSERVATION

The course aims to place the student in a position to know and to be able to use different materials and techniques for conservation/restoration and maintenance and new use works on the architectural heritage. The course is held alternately in laboratory studios, lectures on scheduled topics, practical applications and aided design and planning. Visit to construction sites will be also organized.

TECHNOLOGICAL DESIGN FOR THE ARCHITECTURAL REQUALIFICATION

The course aims to provide theoretical and methodological tools needed to set up and develop appropriate renovation intervention aimed mostly at twentieth century architecture. The course consists of lectures and exercises, themes related to maintenance and building rehabilitation. It will be developed focusing on:

- a) the survey of pre-existing buildings and urban fabric,
- b) the project and organization of works,
- c) the different typologies of building firms with different specializations,
- d) the various stages of execution techniques (structures, roofs, plasters, dampness protection, thermal insulation, heating plant, electrical systems, plumbing etc.).

CONSERVATION DESIGN STUDIO

The course aims to teach basic knowledge of the history and theory of architectural conservation, and to provide skills in analytical survey, historical research, reading and diagnosis of degradation and conservation works; inform the students about regulations and cataloguing; practice in the design of a restoration project. The aim of restoration is not only to conserve the integrity of the resources, but also to reveal its cultural values and to improve the legibility of its design. Restoration is a high specialization operation based on a critical-historical process of evaluation, and must not be based on conjecture.



URBAN REGENERATION AND CULTURAL HERITAGE REGULATORY FRAMEWORK

The course aims to combine the knowledge of the instrument of urban development for the integrated conservation of old town centers, and a critical knowledge of current legislation of cultural heritage. Integrated conservation implies reconciling conservation requirements and town planning objectives considering the values and interests of the existing historic architecture. The minimum interventions at key points in time are best for the community.

The course aims to provide theoretical-methodological and operating tools for carrying out a planning process aimed at upgrading the existing city, with particular reference to degraded suburb contexts and potentially subject to significant changes. This purpose will be achieved both by checking the environmental, morphological, economic-financial and administrative flexibility, and by the choice of innovative tools flexible enough to ensure the triggering of virtuous processes of recovery and renewal by means of the involvement of individuals and private operators in actions of public interest.

By assuming as a theoretical premise, the formation reached during the “Building legislation and government of the territory” course of the first academic year, the course aims to provide students a basic critical knowledge of the current legislation in the field of protection of cultural heritage, with particular attention to monumental and architectural heritage and to the environmental and landscape issues.

DESIGN STUDIO II

The course aims to convey to the students the theoretical and practice knowledge necessary to manage, with full awareness, the development of an architectural executive project of a limited space, to verify the compatibility of the formal intentions with the complex economic restrictions and functional, structural, technological and engineering solutions. In this context, the compliance of the construction project is systematically investigated, identifying the different components and checking the feasibility of design solutions.

URBAN MORPHOLOGY AND PROFESSIONAL PRACTICES

The course objective is to provide analysis tools in the study of the building fabric and its historical transformations and in the interpretation of specific building activities in professional and economic aspects, as instruments aimed at expanding the design process control capabilities.

The course aims to provide necessary skills to prepare, in the professional practice, documents and drawings required in different steps of the production process, to explain the utility functions and expectations of a project, in terms of identified needs, starting from the

planning phase of the intervention. Regarding the architect professional business both practical evaluation of estimates and operative activities, the procedure for implementing and verifying the procedures and rules for implementation of each project in different stages of its life cycle will be detailed, taking into account the opportunities and restrictions posed by the historical, territorial, settlement, regulatory, financing and of governance in which it fits.

Goal of the Urban Morphology course is to provide students with tools of analysis of built landscape aimed to the architectural design. The course is the phase of critical interpretation (reading) of the urban environment which coincides with the design choices and is complementary to that of Architectural design 2 course, held by a different teacher. Topic of the lectures will be mainly the study of the formative processes of architecture at its various scales, especially that of the building organism, and aggregative organism (urban fabric), closer to the design themes of the fifth year of the degree course in Architecture (Conservation).

ORGANIZATION OF THE CONSTRUCTION SITE FOR RESTORATION

The course aims to teach basic skills in the organization of a restoration site at its different stages and in its various aspects. In specific, the different requests of a restoration site will be put into evidence: on one side productivity and optimization of the work, on the other the needs of a historical-critical comprehension of the building. On these premises, the course deals with the problems of a building site and, more specifically, those of a restoration work (in specific reference to the sequence of operations to be performed and to the knowledge of the building).

Two other more extensive examples from La Sapienza of Rome are:

Elementi di Restauro Architettonico – Elements of Architectural Restoration

Aims

The course will consist of lectures and exercises. The aim will be to bring out among students issues related to the study of architectonic organism and come through a historical-critical path to the preliminary intervention of restoration.

Each week will be dealt a single specific topic to get ready a plan for adjusting measures.

There will be a series of educational visits to be confirmed during the course.

Exercises

Weekly revisions.

Examination scripts

The works required for the exam, although calibrated on the specific nature of the topic chosen, will have to conform to the following general provisions:

- preparation of graphics on boards in A1 format (cm 59,4x84,1);
- execution of a reduction of the aforementioned boards in A3 size (cm 29,7x42);
- presentation, at the final exam, of a maximum number of 16–18 graphic tables (informat A1 and A3), because of the theme chosen and the consistency of the study group;

Drafting of a brief written report-on panels in A3 format, obtained combining, on each sheet, two A4 folders (cm 21x29.7) – that contains:

- a) a concise description of the artefact (1 folder, 30 lines per 65 characters);
- b) a chronology, with direct references to the bibliography and archival *regesto* (1–2 folders);
- c) a historical and critical synthesis (2–3 folders);
- d) a technical-critical memory on the characterization of materials and analysis issues of degradation, conservation and restoration project (2–3 folders);
- e) the archival-documentary *regesto*;
- f) bibliography;
- g) an essential photographic documentation (about 5–6 folders).

The report could be supplemented by optional appendices with archival documents (transcripts or photographic copies).

Study and development of written papers and drawings will be followed periodically by teaching staff. The examination will be much discussion on the boards in A1 size than on other in A3 format. These should not be bound, but it folded sheets, better if contained in a clear plastic bag.

The tables should be numbered consecutively and shall be entered, among other indications (University, faculty, laboratory, ...) the authors' names in full.

The copy of the work in A3 format will be retained for archive of the course.

Bibliography

It is contained within the course program, posted relatively to individual topics covered in each lesson.

Exam

The exam is divided into two parts: the first provides for the presentation of works made during the year in relation to the chosen theme; the second in a check on the preparation of each student on the theory, history and techniques of "Elements of architectural restoration."

Each week will be dealt a single specific topic of coming to know the architectural heritage, and to the elaboration of a preliminary restoration project.

The attached program has some bibliographical suggestions depth for each lesson.

PROGRAM OF THE LESSONS

First week

Introduction of the course of Elements of Architectural Restoration: aims and methods.

- 1) General issues: definition of Restoration and basic terminology.
- 2) From the monument to the cultural asset.
- 3) The theoretical foundation of the restoration, the most recent positions: *restauro scientifico* (scientific restoration), *restauro critico* (critical restoration), the theory of Cesare Brandi, *restauro critico-conservativo* (critical conservative restoration), the pure conservation.
- 4) the extension of the scope of the restoration, from the individual object to the territory.

Second week

The restoration and the knowledge: the methodical study of monuments.

It will be presented a concrete architectural episode to exemplify the method of analysis.

After this presentation we invite students to choose a monument to "adopt"; it then will start the operational activities of the course.

It is believed in preferential line, to concentrate the exercises on no large size monuments, but stratified of Rome, Lazio and other centers to choose from with the teaching staff, but all accessible for the period necessary for the exam.

The course must be understood as a preparatory to the next Restoration Laboratory, year IV.

Third week

Are reminded some other methodological examples relating to the study of the architectural heritage:

- 1) Standards for the preparation of graphics survey and restoration survey.
- 2) The methodical study of existing buildings: literature searches, historical archives, and direct observation.
- 3) Attention is drawn to systematic use of graphic and photographic survey for the understanding of the architecture.

Any site inspection has to be agreed between the trainees.

The individual components of the course must submit the choices for exercises, then will start the verification tests that will have a weekly basis.

Fourth and fifth week

These two weeks will be dedicated to the review of some fundamental concepts of theory and the history of restoration.



- 1) The attitude on existing buildings in the Renaissance and in 600–700 centuries;
- 2) The nineteenth century in Europe: *restaurò stilistico* (stylistic restoration) and revivals, Eugene E. Viollet-le-Duc and the parable of the restoration “in style”;
- 3) The nineteenth century in Europe: *antirestaurò* (anti-restoration) and romanticism, John Ruskin, William Morris and SPAB;
- 4) *Restaurò filologico* (philological restoration) in the late nineteenth century and brief outline of Alois Riegl and Max Dvorak;
- 5) The season of *restaurò scientifico* (scientific restoration), from Camillo Boito to the thirties of the twentieth century with particular reference to Rome: Gustavo Giovannoni and Antonio Muñoz;
- 6) Profiles of *Carte del Restaurò* (1883–1972).

Sixth week

- 1) General rules for the restoration of architectural heritage, bodies responsible for protection.
- 2) The ICCD's catalog sheets (*Istituto Centrale per il Catalogo e la Documentazione*, Central Institute for Cataloging and Documentation)
- 3) The ICR's risk map (*Istituto Centrale del Restaurò*, Central Restoration Institute). Bibliographical suggestions.

Seventh week

Current state analysis intervention program.

It comes with some episode of study and restoration of the architectural heritage, Roverella palace in Ascoli Piceno and Palazzo Conservatori in Rome, the methodology to be applied operationally to the restoration exercises.

Eighth week

Current state analysis and intervention program.

- 1) Exemplification of the defects of the architectural reality: the degradation of the materials and instability of the structure.
 - 1a) Preliminary investigations for knowledge.
- 2) Analytical readings of the degradation of materials, NORMAL lexicon, genesis and processuality.
- 3) Exemplification of some cases of degradation and instability.

Nineth week

The issue of the use of existing structures, adaptations and museology and museum design criteria. Landscape.

- 1) We will insist on the concept of the restoration understood as critical interpretation.
- 2) The restoration project, through the adaptation of pre-existing buildings, theories and achievements through the reading of some Italian and European events.

Tenth week

The course presents a special episode for the study and restoration of a monument symbolizing humanity. The Vatican necropolis, history, restoration and conservation.

Eleventh and twelfth week

The historical-critical analysis.

The course aims to impart specific training in this specific field.

The system of doctrine leads us to consider the historical research as a central moment of the restoration and, consequently, to classify the whole process as a historical-critical process. The formation process is based on theoretical assumptions of the restoration and on the deepening of materials and traditional techniques as well as the methods of investigation and study of the monuments.

The historical-critical analysis of the architectural reality.

- 1) The iconography of the monument and the *registro* of the sources.
- 2) The analysis of the constructive characters.
- 3) The analysis of the masonry equipment.
- 4) Analysis of architectural features in reference to other works.
- 5) The re-use of old elements in architecture, the *Spolia*.
- 6) The analysis metrology and proportional.
- 7) The reading of the architectural orders.
- 8) The time line of the architecture.

Thirteenth week

Conclusion of the Course.

References to current trends in architectural and environmental restoration with some episodes.

ANOTHER COURSE MAY BE:

Course	„LABORATORIO DI RESTAURO”
Contact Hours	125
Teaching objectives	Teaching objectives will be to emerge and mature among students the issues related to the study of the architectural heritage. Complete a historical-critical study started in the course of “Elementi di Restauro”. Draw up the restoration project, which provides the analysis of the degradation and the relevant proposals of interventions. Each week will be dealt with a single specific topic to get the drafting of a real restoration project executive.
Laboratory program and planning activities	<p>We call some basic concepts, linking the definitions of restoration and terminology. Current trends of Restoration: theoretical foundation of the restoration, the most recent positions, the critical restoration, critical-conservative restoration, pure preservation, maintenance-repair.</p> <p>The season of the scientific and philological restoration by Corrado Ricci and Camillo Boito to thirty to forty years of the twentieth century with particular reference to Rome.</p> <p>Are reflection on the cultural context of Alois Riegl (1857-1905) and Cesare Brandi (1906-1988). These two characters have left a strong legacy in the way of understanding the conservation and restoration.</p> <p>The archaeological restoration: reflection on some archaeological sites include pre-existing urban areas or across the territory; issues relating to the protection of sites, vulnerability, predictability and risk maps for their use and then some guidelines for the solution of technological systems.</p> <p>Analysis of the current status and interventions with examples of the defects of architectural reality: the degradation of materials and geological instability of the structure, preliminary investigations for knowledge, analytical reading of the degradation of materials, vocabulary NORMAL, genesis and processuality, examples of some cases of interventions.</p> <p>The collapses and related interventions of consolidation: foundations, elevated structures, the theme of the arc and the vaults, floors, roofs.</p> <p>Particular attention is turning to temporary works and propping to be implemented on construction site sand in cases of emergency earthquake. The humidity: causes and remedies.</p> <p>Adaptations and criteria of museology and museum: it insists on the concept of restoration is understood as critical interpretation; museum project: theories and achievements through the reading of some Italian and European episodes.</p> <p>The liturgical adaptation.</p> <p>The intervention in the historic city: the historic centers between conservation and innovation</p>
Method of examination	<p>The course will consist of lectures and tutorials.</p> <p>The exercises will be followed throughout the course, in the working group.</p> <p>There sults will be evaluated with an individual interview relating to the topics covered in class and contained in the bibliography and through the evaluation of drawings exercise</p>



PROPOSAL FOR LABORATORY FOR CONSERVATION/RESTORATION

Proposal for Laboratory for Conservation / Restoration

First week

Inaugural speech of the Laboratory of Restoration: purposes and methods. The current trends in Restoration.

(Prolusione del Laboratorio di Restauro: fini e metodi. Le tendenze attuali del Restauro)

1. We recall some basic concepts, so will be essential to reconnect to the definitions of Restoration and to the terminology.
2. The theoretical foundation of the restoration, the most recent positions: *restauro critico*, *restauro critico-conservativo*, *pura conservazione*, *manutenzione-ripristino* (critical restoration, critical-conservative restoration, the pure conservation, the maintenance-restoration).

Second week

Restoration in Rome from the XX century

(Il Restauro a Roma nei primi decenni del Novecento)

This week will be dedicated to a resumption of some fundamental concepts of theory and history of restoration.

The season of the *restauro filologico-scientifico* (philological-scientific restoration) by Corrado Ricci and Camillo Boito.

Thirty to Forty-years of the twentieth century with particular reference to Rome.

The central topic of these lessons will be dedicated to the doctrinal reflection and operational activity of Gustavo Giovannoni and Antonio Muñoz.

We will address *Carte del Restauro* (Restoration Charters), the so-called first formulation of 1883, to *Carta di Atene* (Athens Charter) of 1931, and to Italian Charter of 1931, then the Instructions for the Restoration of Monuments of 1938.

Third week

Theory of conservation from Riegl to Brandi

(Teoria del Restauro da Riegl a Brandi)

The purpose of this lesson is to present a reflection on the cultural context of Alois Riegl (1857–1905) and Cesare Brandi (1906–1988). These two characters have left a strong legacy in the way of understanding the conservation and restoration.

The Cesare Brandi theory manifest itself an implicit liability to Riegl's theoretical contribution but it feeds mainly of converging contributions on the themes of conservation. More specifically we will face some

aspects of the restoration, in some quarters of Europe from the end of the first half of the twentieth century, then we will analyze some renovations conducted by the *Istituto Centrale del Restauro* (Central Institute of Restoration).

Fourth week

Archeological conservation

(Il Restauro archeologico)

Reflection on some archaeological sites include urban areas or existing structures scattered in the territory. We will present a number of solutions Italian, European and outside Europe implemented over time. Today's reflection will try to show how respect for the ancient fragment and the set of information that its authenticity guaranteed, "Made us feel even more intolerable false-ness of imitative restoration".

We will still show issues related to the protection of sites, the vulnerability; predictability and risk maps then to their use and some guidelines for the solution of technological systems. They will also be mentioned the relationship between archeology and territory with interventions in archaeological contexts.

Fifth week

Restoration: Analys of Decay and Deterioration

(Il Restauro: Analisi dello stato attuale e interventi)

We will present some examples of the defects of the architectural reality: the degradation of materials and some instability of the structure.

- a) Preliminary investigations for knowledge;
- b) Analytical reading of degradation of materials, the NORMAL lexicon, genesis and processuality;
- c) examples of some cases of interventions;

The more specific issue addressed in this lesson deals with interventions on stone material.

Sixth and seventh week

Conservation Program

(Il Restauro)

Analysis of the current situation and proposals for interventions. The destructions and related consolidation interventions

The foundations, the structures in elevation.

The theme of the arch and vaults.

The floors.

Roofing systems.

Particular attention is turning to temporary works from carry on construction sites and in cases of emergency seismic.

Eighth week

Humidity (Dampness)

(Il tema dell'umidità: cause e rimedi.)

The water, physical deterioration factor, is presented in both the buildings and the environment. They have a few causes:

- capillary rise,
- infiltration,
- condensation.

They analyze some remedies:

- the horizontal beam,
- the physical and chemical processing,
- the arrangement of cavity and drainages,
- the heating tubes,
- bland electroosmosis.

Nineth and tenth week

New use for preesistance

Adaptation and criteria of museology and museography

(Il tema dell'uso delle preesistenze architettoniche e storico-artistiche. Adattamenti e criteri di museologia e museografia).

- 1) It insists on the concept of restoration understood as critical interpretation.
- 2) The museum project: theories and achievements through the reading of some Italian and European events.

It is stated that: "The conservation of monuments is always facilitated by their use in functions useful to society: such use is therefore desirable but it must not change the distribution and appearance of the building..." from Carta di Venezia (Venice Charter), Art. 5.

Eleventh week

In Italy and in some countries in Europe is important the Liturgical adaptation

(L'adeguamento liturgico)

For students preparing a restoration project for a church is deemed essential to provide the information related to the theme of the liturgical adaptations, in particular, in the recurrence of the 50th anniversary of Vatican II.

After a required introductory section, also of historical character, will address the issues related to the insertion of the altar, the ambo, the seat and the baptismal font.

It recalls the importance of the issues related to lighting systems, for different moments of the celebration, those of security and climate control.

Twelfth week

Historic centres and landscape

(L'intervento nella città storica. Il Territorio)

The historic centers between conservation and innovation. We will see how this axiom is always present within the restoration.

The restoration contributes to achieve the purposes for which its architecture, to define each with its own characteristics, the physical and expressive structure of human settlements in the environment.

Among the topics covered we will insist on the different operations carried out in the various European countries from the new additions on the ancient, to the recoveries, to the theme of color finishes, the street furniture. We will present some reflections: the city as a museum of ancient monuments and works of art; the city as a museum of its history and its values.

Thirteenth week

Conclusion

(Conclusione del corso.)

We recall briefly the topics covered during the semester.

We will mention the issue of the restoration of modern and environmental design.

The architectural restoration laboratory has turned its attention on the teaching of the doctrine of cultural values, so to the conservation and restoration. The latter is understood as an act of culture in order to pass on to future generations our cultural and environmental heritage

CONCLUSIONS

The rediscovery and the conservation of values must be one of the major issues of our society, one should endeavor not to indulge only in commercialization and facilities, but to transmit to young people the passion and respect for the memory and the past, so that it to be posterity.

The Authenticity of a work of art is a measure of truthfulness of the internal unity of the creative process and the physical realization of the work and effects of its passage through historic time.