COURSE DESCRIPTION
RESTORATION LABORATORY

SSD: RESTAURO (ICAR/19)

DEGREE PROGRAMME: ARCHITETTURA (N14)
ACADEMIC YEAR 2022/2023

COURSE DESCRIPTION

TEACHER: MARINO BIANCA
PHONE: 081-2538021
EMAIL: bianca.marino@unina.it

GENERAL INFORMATION ABOUT THE COURSE

INTEGRATED COURSE: NOT APPLICABLE
MODULE: NOT APPLICABLE
CHANNEL: 02 Cognome A - Z
YEAR OF THE DEGREE PROGRAMME: V
PERIOD IN WHICH THE COURSE IS DELIVERED: SEMESTER I
CFU: 8

REQUIRED PRELIMINARY COURSES

Theories and History of Restoration (Teorie e Storia del Restauro); Fundamentals of Construction Science (Fondamenti di Scienza delle Costruzioni).

PREREQUISITES

Any requirement.

LEARNING GOALS

The course aims to provide students with the necessary knowledge to let them face the complexities of the conservation project throughout the adequate understanding of the historic built heritage, autonomously evaluating the processes which determine the built palimpsest, in order to transmit to the future the architecture heritage in its entirety integrity and authenticity and to produce an intermediate-level architectural conservation project according to the current legislation. Students will be provided also with the necessary tools allowing them to analyze autonomously the built heritage and to evaluate the layering of the different interventions of

transformation, conservation and restoration occurred during the centuries.

EXPECTED LEARNING OUTCOMES (DUBLIN DESCRIPTORS)

Knowledge and understanding

At the end of the course and after the exam, the student will be able to acknowledge the conservation project methodology at different scales, to read and to portray a historical fabric, evaluating autonomously its historical and construction events, its materials and techniques, its collapse and decay phenomena, and also its tangible and intangible values, in order to transmit it to the further generations in its material integrity, defining the methodology approaches for its conservation. The student will be able to apply its knowledge in an architectural conservation project culturally aware and technically updated to the different scales of the built heritage.
The student must:
-show that he/she has acquired the methodology of the architectural conservation project at different scales, relating to the current disciplinary debate;
-show that he/she has gained the critical understanding methods of the built heritage relating to the historical transformation occurred during time;
-show that he/she knows and portray the cultural values, tangible and intangible, preceding the choices for safeguard, conservation, management and enhancement of the built heritage;
-show that he/she understand with critical and multidisciplinary approach the survey and diagnosis techniques on the built heritage aimed to the restoration and conservation;
-show that he/she possess the survey and representation techniques of the construction systems of the historical architecture;
-show that he/she knows the survey and representation techniques of the collapse and decay phenomena on the built heritage;
-show that he/she knows the intervention techniques for restoration and conservation of the built heritage;
-show that he/she has acquired the knowledge of the current legislation on protection of the built heritage;
-show that he/she is able to define the project strategies for the enhancement and improvement of use for the built heritage.
The training course, starting from the knowledge the evolving debate on architectural restoration –already studied into its historical aspects in the Theories and History of Restoration course –aims to convey to the student a methodology for the architectural conservation project in its many phases, of survey, of diagnosis, of concept and checking. Through this methods the students acquire the ability to draw up a culturally aware and technically updated project on built heritage.

Applying knowledge and understanding

The student must show:
-to have developed a critical ability of the built heritage, relating to the history of urban architectural, restoration transformations;
-to be able to apply methods of visual and instrumental investigation for the knowledge of the material, morphological, typological, constructional and structural aspect of the built heritage;

-to know how to use the advanced computer techniques and tools for the critical representation of the heritage in its historical recognition and through its phenomena of instability and decay;
-to know how to develop a restoration, conservation, reuse, enhancement project of the built heritage culturally aware in the line with disciplinary and legislative orientations.
The training course is aimed to transmit the operating abilities necessary to correctly apply the acquired knowledge by the student in the definition of project strategies for the conservation and restoration of the architectural heritage.

Autonomy of Judgement

The student must be abe to re-elaborate and to apply the methodologies and the principles inset one at the base of a culturally aware conservation project, and to define an autonomous way to a design solution coherent with the aforementioned assumptions, evaluating the specificities of the single case study. The autonomy of judgement will be progressively checked and refined throughout the laboratories activities and the field activities, the collective reviews and the final exam.

Communication Skills

The student must be able to communicate and argue the project proposals collaborating with his or her colleagues, with the professor and his or her collaborators and also with other teachers during the intermediate and final juries. The student must be able to expose the project proposals thanks to his graphic and technical works and using effective digital presentation also clear for non-expert audiences.

Learning Skills

The student must acquire an adequate learning skill allowing him or her to broaden his or her knowledge via the consultation of bibliographical sources, the participation in seminars, conferences, international workshops provided by the Department or abroad. At the end of the training path the student must be able to continue his or her studies through third level training programs (School of Specialization, Masters, Ph.D. programs) or to update his knowledge by himself or herself.

COURSE CONTENT/SYLLABUS

Orientation topics.

Design and conservation walked to architecture, archaeology and landscape. The cultural asset and evolution of architectural, urban and environmental heritage. The concept of historic urban landscape (HUL), cultural landscape and integrated conservation. Critical reading and interpretation of architecture. The dimension of the historic building and its identities; aesthetic instance, historical instance, psychological instance. Some theoretical issues through emblematic cases: the relationship between structure and architectural surface, the treatment of lacks, the relationship between permanence and transformation in restoration as a matrix of the relationship between old and new. The "criteria": minimal intervention, distinguishability, compatibility, durability, reversibility; respect and the criterion of authenticity. Current method orientations of architectural restoration between "conservation," "restoration," and "reuse."

Methodology and techniques of/for the restoration project.

The methodological steps of the restoration project: analysis, design hypothesis, verification, executive design, execution. Knowledge in the analysis phase and the reading of the building in its urban and/or landscape context and in its constructive, material and decorative components. Direct and indirect surveys and the surveying techniques. The constructive material palimpsest and the representation of the historic building. Natural and man-made materials, traditional construction techniques and types in historic building; binders and mortars. Soils and foundation structures. In- and above-ground masonry structures: masonry, platbands, stairs, arches, vaults, floors, roofs. Traditional finishes of architectural surfaces. Survey of deterioration and cracking framework. Material alterations and surface deterioration. Lexicon UNI-NorMaL 11182/2006. Diagnosis: tensional analysis and study of the crack framework; identification of the static pattern; subsidence and instabilities. The instrumental cognitive investigations of masonry structures: of non-destructive tests, in situ and laboratory tests; structural monitoring and archaeological prospecting. The choice of appropriate functions: identification of the criticalities and potentials of the urban and/or territorial context and contemporary environmental and social dynamics. Conservation interventions: conservation and structural consolidation. Consolidation of foundation and elevated structures; consolidation of floors, vaults, staircases, platforms and roofs. Surface treatment and restoration of moisture damage. Reinforced concrete architectures: problems and restoration.

Normative documents and tools.

The Venice Charter (1964), The World Heritage Convention (1972). The Italian Restoration Charter of 1972 (Circular no. 117 of 6 April 1972 - Ministry of Public Education).
The Declaration of Amsterdam (1975) and the Granada Convention (1985). The Washington Charter (1987). The Nara Document on Authenticity (1994). The European Landscape Convention (2000). Faro Convention (2005). Vienna Memorandum (2005). Recommendation on the Historic Urban Landscape (2011). the Code of Cultural Heritage and Natural Landscape (Legislative Decree no. 42 of 2004). The Ordinance of the President of the Council of Ministers, Ordinance No. 3431 (2005) and the Guidelines for the evaluation and reduction of seismic risk of the cultural heritage aligned with the new Technical Standards for Construction (Ministerial Decree 14 January 2008), MIBAC Circular No. 26/2010. T.U. on construction (Legislative Decree 380/2001) and interventions under Article 31 of Law No. 457/1978. Guidelines to overcome architectural barriers in cultural heritage sites (Ministerial Decree March 28, 2008, in GU n. 114 of 16-5-2008 - Ordinary Suppl. No. 127).

READINGS/BIBLIOGRAPHY

General and orientation bibliography:

- Brandi C., *Teoria del restauro*, Einaudi, Torino 1977.
- Carbonara G., *Architettura d'oggi e restauro. Un confronto antico-nuovo*, UTET, Torino, 2011, pp. 35-57.
- *Codice dei beni culturali e del paesaggio* - Decreto Legislativo 22 gennaio 2004, n. 42.
- P. Fancelli, *Il progetto di conservazione,* Guidotti, Roma 1983 (capitolo '*Linee di metodo per la lettura diagnostica e per l'intervento conservativo*').

- Marino B. G., *Restauro e arte*, in *Arte Contemporanea* (4 voll.), Istituto dell'Enciclopedia Treccani, Roma 2021, vol. IV, pp. 61-63.
- Marino B. G., *Restauro dell'arte contemporanea*, in *Arte Contemporanea* (4 voll.), Istituto dell'Enciclopedia Treccani, Roma 2021, vol. IV, pp. 59-61.
- Marino B. G., *Sugli impossibili margini della conservazione,* in M. Dezzi Bardeschi (a cura di), *La conservazione accende il progetto*, artstudiopaparo, Napoli 2018.
- B.G. Marino, *Restauro, storia, progetto: una questione da affrontare*, in Fiorani D. (a cura di), *RICerca/REStauro*, Edizioni Quasar, Roma 2017.
- Marino B. G., *Il restauro dopo e durante i* Moderni: *un* autentico *valore di novità*, «Confronti», numero monografico *Il restauro del Moderno*, n. 1, 2012, pp. 110-118.
- Marino B. G., *Note sulla definizione dell'oggetto di tutela nelle carte del restauro*, in Aveta A., Conservazione e valorizzazione del patrimonio culturale. Indirizzi e norme per il restauro architettonico, Arte Tipografica Editrice, Napoli 2005, pp. 217-223.
- Riegl A., *Il culto moderno dei monumenti. Il suo carattere i suoi inizi*, a cura di S. Scarrocchia, Nuova Alfa Editoriale, Bologna 1990, pp. 27-75.

Conservation techniques:

- Aveta A., *Materiali e tecniche tradizionali nel napoletano*, Napoli 1987.
- Aveta A., *Restauro architettonico e conoscenza strutturale*, Napoli 1989, pp. 147-217.
- Aveta A., *Tecniche per il restauro: problemi di umidità negli edifici monumentali*, Napoli, 1996.
- Aveta A., *Consolidamento e restauro delle strutture in legno: tipologie, dissesti, diagnostica, interventi,* Dario Flaccovio Editore, Palermo 2013.
- Bartolomucci C., Cantalini L., *Tecnologie per la conservazione delle superfici materiche,* in D. Fiorani (a cura di), *Restauro e tecnologie in architettura*, Carocci, Roma 2009, pp. 285-334.
- Di Stefano R., *Il consolidamento strutturale nel restauro architettonico*, Napoli, 1990.
- Esposito D., *Malte, intonaci e stucchi*, in G. Carbonara (a cura di), *Atlante del restauro*, Utet, Torino 2004, tomo I, pp. 75-101; Id., *Finiture diverse*, *ivi*, pp. 368-396; Capponi G., *L'invecchiamento e il degrado*, ivi, pp. 433-455; Conti C., Martines G., *Conservazione di materiali e superfici*, ivi, tomo II, pp. 669-703.

Supporting bibliography for charting:

- Defez A., Monaco L.M., *Il consolidamento degli edifici,* Liguori, Napoli 2002.
- De Gennaro M., Langella A., Cappelletti P., Colella A., Buccheri G., D'Amore M., *Il degrado dei geomateriali*. in Aveta A., *Diagnostica e Conservazione l'insula 14 del Rione Terra.* vol. 4, p. 206-232, ESI, Napoli, 2008.
- Fiengo G., Guerriero L. (a cura di), *Murature tradizionali napoletane: cronologia dei paramenti tra il XVI ed il XIX secolo*, Arte Tipografica, Napoli 1999.
- Gallo Curcio A., *Sul consolidamento degli edifici storici*, EPC Libri, Roma 2007, pp. 253-291.
- *Linee guida per il superamento delle barriere architettoniche nei luoghi di interesse culturale* - Decreto Ministeriale 28 marzo 2008.
- Musso S. F., *Tecniche di restauro architetto*nico, Utet, Torino 2013.
- Aggiornamento *Norme tecniche per le costruzioni* (NTC 2008) - Decreto 17 gennaio 2018
- Negri A., Russo J., *Degrado dei materiali lapidei: proposta di simbologia grafica*, in G. Carbonara (a cura di), *Trattato di restauro architettonico. Secondo aggiornamento*, Utet, Torino

2008, pp. 533-544.
- Norma UNI 11 182/2006 per la descrizione delle alterazioni e degradazioni macroscopiche dei materiali lapidei.

Bibliography on topics for further study (possible thematic and optional fields for further study):
- Bellini A., *L'intervento strutturale nel restauro come stratificazione di "rilevante interesse storico"*, in A. Aveta, S. Casiello, F. La Regina, R. Picone (a cura di), *Restauro e consolidamento. Atti del Convegno "Restauro e consolidamento dei beni architettonici e ambientali: problematiche attuali", Napoli 31 marzo-1 aprile 2003,* Mancosu, Roma 2005, pp. 13-18.
- Di Stefano R., *Il recupero dei valori. Centri storici e monumenti. Limiti della conservazione e del restauro*, ESI, Napoli 1979.
- Marino B.G., *Restauro e autenticità: nodi e questioni critiche*, Edizioni scientifiche italiane, Napoli 2006.
- Marino B.G., *Valori architettonici e conservazione*, in A. Aveta (a cura di), *Diagnostica e conservazione. L'insula 14 del Rione Terra*, ESI, Napoli 2008, PP. 45-60.
- Marino B.G., *Luoghi esterni, immagini interne: attualità del percorso della conservazione dell'architettura in Roberto Pane*, in Atti del Convegno *Roberto Pane tra storia e restauro. Architettura, città, paesaggio,* (Napoli, 27-28 ottobre 2008), Marsilio, Venezia 2010.

Note: During the course, any bibliographic references useful for the development of the project theme will be indicated and provided.

TEACHING METHODS OF THE COURSE (OR MODULE)

The course is divided into ex cathedra lectures (about 40 percent), application exercises (about 40 percent) and site visits and restoration workshops (20 percent), focusing on the topics illustrated during the course. The course is articulated with the alternation and relative integration of lectures and classroom exercises. For the fulfillment of the year's theme, students, divided into groups (of two up to a maximum of five components), will tackle a project theme (free or proposed) and hold visits and inspections for the retrieval of cognitive data in order to achieve thematic graphing. The papers in the course of the workshop activities will be subject to discussion and review with scheduled inter-course presentations to showcase the progress of their work. The examination will focus on discussion of the design work and verification of theoretical acquisitions of the topics in the program. In-depth thematic seminars are planned for the purpose of formative refinement useful for the advancement of one's work.

EXAMINATION/EVALUATION CRITERIA

a) Exam type

- ☐ Written
- ☐ Oral
- ☑ Project discussion

☑ Other : The examination test, which is individual, involves the discussion of the project carried out in the group through the presentation of graphs (the final version of which is also delivered on CD-ROM at the end of the course) and verification about the preparation acquired about the topics covered during the lectures, supported by the bibliography. The assessment takes into account the degree of maturity of the theoretical topics, the interrelation between conceptual and design components, expository and synthesis skills as well as the degree of interaction in group work.

In case of a written exam, questions refer to

☐ Multiple choice answers

☐ Open answers

☐ Numerical exercises

b) Evaluation pattern

Evaluation will be based on the oral interview and discussion of the graphic design paper.