

# **INTRODUCTION TO THE CONSERVATION OF VENICE'S BUILT HERITAGE**

(Materials & techniques, decay and conservation)

## **Columbia Venice Summer Program 2018**

### **INSTRUCTOR**

Mieke Van Molle

### **COURSE SCHEDULE**

Wednesdays 9:00-11:00 & Fridays 9:00-15:30 (break included)

*lecture hours may slightly vary related to site visits*

Save Venice component: individual research assignment relating to Save Venice's conservation projects

### **BACKGROUND**

Venice has developed over the centuries into one of the most remarkable cultural patrimonies in the world due to a series of unique historical, geographical, social and political circumstances. The historic city of Venice, together with its Lagoon, was inscribed on the World Heritage List in 1987 as an extraordinary architectural masterpiece, comprising diverse architectural styles and historical stratifications but preserving a coherent unit.

The big flood of 1966, which put in evidence the dramatic conservation problems of Venice's historic and artistic heritage, gave rise to a significant international campaign launched by UNESCO collecting and channeling contributions of many private organizations to restore and preserve the buildings of Venice and its art treasures in close collaboration with the local authorities. Over the past 50 years many research and conservation projects have been set up in Venice, functioning as a pilot laboratory for conservation practice, scientific research, experimentation and evaluation of stone conservation treatments.

The state of conservation of the historic city and its Lagoon, closely followed by the UNESCO World Heritage Center, is now also threatened by tourism pressure, large scale infrastructure projects and intense water traffic, whereby the site risks to be inscribed on the list of the World Heritage in Danger.

### **PROGRAM OBJECTIVES AND CONTENT**

The course aims at providing participants with an understanding of the Built Heritage of Venice, its historical development, construction techniques and building materials and at gaining insight in the related conservation problems. Students are first introduced to the particular conservation problems of the city of Venice and its Lagoon environment. The course then addresses the historical growth and architectural development of Venice, its specific construction techniques and its great variety of stone materials, originating from all over the Mediterranean. It subsequently focuses on the multidisciplinary conservation process, including the diagnostic survey, the different decay mechanisms and finally offering an overview of the conservation treatment.

The course includes a series of guided walking tours and diversified site visits which will illustrate and complement class lectures. In addition, participants will conduct a diagnostic group research on a historical building in Venice consisting in a condition survey of the monument where they will be requested to observe, discuss, describe and document the different constituent materials, their various forms of decay along with the related distribution pattern, integrated with a historical study of the monument.

### **Course requirements and grading**

Students are required to attend and actively participate in all course activities. They should complete all assigned readings before the related class meeting so as to engage with the topic and are expected to draw also on these source materials for their research papers. Students should be flexible for possible required changes, especially related to site visits, in the scheduled program.

Grading will include active class participation (25%), a written and documented research paper to be completed at mid-term (25%), as well as a documented end-term research (written paper 25% and oral presentation 25%). Detailed information will be given during the course. It is important that students bring their camera for documentation as well as closed comfortable shoes with rubber soles (e.g. sneakers) for visits to ongoing conservation projects.

### **Academic Honesty**

Please read and carefully review Columbia's University's Undergraduate Guide to Academic Integrity at [www.college.columbia.edu/academics/integrity](http://www.college.columbia.edu/academics/integrity). Academic integrity is expected of all students and plagiarism or any other form of academic dishonesty will not be tolerated. Offenses will result in a failing grade and will be referred to the Dean's Office.

## **CURRICULUM AND READINGS**

### Useful reference material:

- Overview of architectural history and styles with proper terminology:  
*The Grammar of Architecture*, ed. Emily COLE, Boston - New York - London, 2002, selections.
- Glossary of architectural terms and Venetian words:  
Deborah HOWARD, *The Architectural History of Venice*, New Haven & London, 2002: *Glossary of Architectural Terms and Venetian Words*, p. XIII-XVI.
- Biographical notes on the architects of Venice:  
Richard GOY, *Venice. The City and its Architecture*, London, 1977: *Biographical Notes on the Architects of Venice*, p. 308-309.
- Short bibliography on Venetian architecture, outdoor sculpture and restorations

## WEEK 1

### Wednesday, June 13

#### **Introduction to Conservation in Venice – lecture starts at 9:00**

Teaching method: PPT presentation

Readings:

- Venice Restored, UNESCO, 1978, p. 7-9 and 29-41.
- Augusto GHETTI and Michel BATISSE, *The Overall Protection of Venice and its Lagoon*, in *Nature and Resources*, 19, 4, 1983, p. 1-13.
- Bernard M. FEILDEN, *The Principles of Conservation*, in *Conservation of Historic Stone Buildings and Monuments*, Washington D.C., 1982, p. 22-30.

### Friday, June 15

#### **Venetian Perspectives: Historical Development of Venice and its Architecture**

Guest lecturer: Paola Modesti, Architectural Historian, Università degli Studi di Trieste  
& Venice International University

Teaching method: PPT presentation + walking tour

Readings:

- Richard GOY, *Venice. An Architectural Guide*, New Heaven, 2010: *Introduction*, p. 3-19.
- Deborah HOWARD, *Venetian Architecture*, in *A Companion to Venetian History 1400-1797 (Brill's Companions to European History)*, 2013, p. 743-778.
- Deborah HOWARD, *The Architectural History of Venice*, New Haven & London, 2002: Chapter 3, *The Medieval City. Building Materials and Techniques*, p. 56-64.

## WEEK 2

### Wednesday, June 20

#### **Characteristics of Venetian Construction Techniques**

Guest lecturer: Edoardo Danzi, Architect, Consultant Lecturer, Università IUAV di Venezia

Teaching method: PPT presentation

Readings:

- Mario PIANA, *Lagoon Building and Safeguarding Problems*, from: *Venice and its Lagoons. World Heritage, a Dialogue between Cultures: which Future?*, n.d., 5 p.
- Richard GOY, *Venice. The City and its Architecture*, London, 1997: Part I.3, *Constructing a City*, p. 46-57.
- Mario PIANA, *Marmorino Plasters in Venice between the XVI and XVII Centuries*, in *Scientific Research and Safeguarding of Venice 2005. CORILA Research Program 2004-2005, IV*, Venezia, 2006, p. 71-90.

### Friday, June 22

#### **Conservation vs Restoration**

Historical restoration interventions & current conservation and maintenance approach

Examples of St. Mark's Basilica and the Doge's Palace

**9:00 - Meeting at the Porta della Carta (entrance Doge's Palace near the S. façade of St. Mark's Basilica)**

Readings:

- *Charter of Venice. International Charter for the Conservation and Restoration of Monuments and Sites 1964*, in *US/ICOMOS Scientific Journal*, vol I, n° 1, 1999, p.7-8.
- Wolfgang WOLTERS, *The Doge's Palace in Venice. A Tour through Art and History*, Berlin - München, 2010, selection.
- Richard GOY, *Venice. An Architectural Guide*, New Heaven, 2010: *The Basilica of San Marco*, p. 197-204.

### **Visit to Save Venice and the Rosand Library & Study Center**

**14:00-16:00** with introduction to Save Venice's research assignment

Readings:

- *Save Venice Inc. Four Decades of Restoration in Venice*, Venezia, 2011, p. 11-13.
- *Rosand Library and Study Center at Save Venice*, in *Save Venice Inc Newsletter*, 2015/16, p. 12-13.

## **WEEK 3**

### **Wednesday, June 27**

#### **Overview of Stone Deterioration Processes**

Teaching method: PPT presentation

Readings:

- Giorgio TORRACA, *Porous Building Materials. Materials Science for Architectural Conservation*, Rome 1988: Chapters II – III, p. 19-47.
- *Air Pollution and Conservation. Safeguarding our Architectural Heritage. Introductory Information on an Interdisciplinary Symposium held in Rome October 1986*, Gothenburg, 1986, p. 14-16.
- Lorenzo LAZZARINI, *General Issues on the Deterioration of Stone*, in *Proceedings of the Interdisciplinary Workshop "The Building Stone in Monuments"*, Athens, 2002, p. 149-160.

### **Friday, June 29**

#### ***The Stones of Venice and their Decay***

**Visit to the LAMA Laboratory for the Analysis of Ancient Materials, Università IUAV di Venezia**

**Visit to St. Mark's Square and Basilica**

Guest lecturer: Lorenzo Lazzarini, Petrographer, Università IUAV di Venezia

Teaching method: Lecture & visits

Readings:

- Lorenzo LAZZARINI, *The Marbles of the Palace*, in *I Marmi del Doge. Design e ospitalità*, Consorzio Marmisti Chiampo, 2009, p. 29-55. (including catalogue of stones and marbles)
- Giorgio TORRACA, *The Application of Science and Technology to Conservation Practice*, in *Science, Technology and European Cultural Heritage, Proceedings of the European Symposium, Bologna 1989*, Butterworth-Heinemann, Oxford, 1991, p. 221-232.
- Lorenzo LAZZARINI, *Pietra d'Istria: Quarries, Characterisation, Deterioration of the Stone of Venice*, in *12<sup>th</sup> International Congress on the Deterioration and Conservation of Stone*, Columbia University, New York, 2012, 16 p.

## WEEK 4

### Wednesday, July 4

#### **Visit to the San Sebastiano Church and the ongoing Save Venice conservation project**

Readings:

- *Churches of Venice. The Museum in the City*, ed. Chorus, Venezia, 2002: *San Sebastiano*, p.121-122.
- *Save Venice Inc. Newsletter* 2016/17 and 2017/18, selections.
- *Sponsorship Opportunities in the Church of San Sebastiano*, ed. Save Venice Inc. , 2013 (?)

### Friday, July 6

#### **The Diagnostic Process and Morphology of Stone Decay**

Teaching method: PPT presentation

Readings:

- Marisa LAURENZI TABASSO, *Stone Conservation in the Last Few Decades: Conceptual & Technical Developments*, in *Proceedings of the Interdisciplinary Workshop "The Building Stone in Monuments"*, Athens, 2002, p. 309-317.
- NORMAL Recommendation 20/85, *Conservation of Stone Material: Project Development, Execution and Preliminary Evaluation*, Rome, 1987, p. 1-6.

#### **Diagnostic Group Research at the Church of S. Maria della Salute**

Glossary on the forms of stone alteration:

- UNI-Beni Culturali 11182 /2006, *Cultural Heritage. Natural and Artificial Stone. Description of the Alteration – Terminology and Description*, Italian Glossary with English translation

Documentation on the Salute Church:

- Bibliography
- Readings
- Historical drawings & maps (1500-18<sup>th</sup> c)
- Measured drawings
- Additional documentation will be distributed during the course

## WEEK 5

### Wednesday, July 11

#### **Overview of Stone Conservation Practice / Materials & Methods**

Teaching method: PPT presentation

Readings:

- Marisa LAURENZI TABASSO, *Materials for Stone Conservation*, In *Actes du Congrès International sur la conservation de la pierre et autres matériaux*, Paris, 1993, p. 54-58
- Giorgio TORRACA, *Porous Building Materials. Materials Science for Architectural Conservation*, Rome 1988: Chapter VII, *Conservation of Stone*, p. 83-95.
- NORMAL Recommendation 20/85, *Conservation of Stone Material: Project Development, Execution and Preliminary Evaluation*, Rome, 1987, p. 6-16.

**Friday, July 13**

***Visit to a conservation project/worksite*** - depending on availability and authorization

Related readings will be distributed during the course

***Diagnostic Group Research at the Church of S. Maria della Salute***

Readings & documentation: see Friday, July 6

**WEEK 6**

**Wednesday, July 18**

***Mortar mixing demonstration***

Reading:

- Giorgio TORRACA, *Porous Building Materials. Materials Science for Architectural Conservation*, Rome, 1988: Chapter IV: Binders, p. 65-82.

**Friday, July 20**

***Participants' Presentations on the findings of their Diagnostic Group Research***

MvM, May 2018