



Columbia University Graduate School of Architecture, Planning and Preservation

HISTORIC PRESERVATION
HISTORIC REPLICAS: REPLACEMENT MATERIALS WORKSHOP
A6421 | SPRING 2014

INSTRUCTOR: MATTHEW REILEY
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TEACHER ASSISTANT: TBD

Mini-Course SYLLABUS

OFFICE HOURS BY APPOINTMENT ONLY

COURSE SCHEDULE
MONDAY, MARCH 10TH THROUGH FRIDAY, APRIL 25TH

• COURSE OVERVIEW •

This mini-course pairs a discussion on the suitability of replacement materials in restoration and conservation projects with a practical workshop component.

Students are instructed in common restoration techniques such as mold making, lost wax casting and composite mortar patching. Students will consider rationales for restoration and gain an understanding of the challenges of replacement materials compatibility with original historic fabric while developing essential manual skills. Hands-on participation includes creating decorative replicas for use in the restoration of a NYC landmark. Course explores multiple case studies and includes an optional tour. Do not wear nice clothes.

• CLASS SCHEDULE •

DATE	TOPIC	PRESENTATIONS
1 03/10	Mini-course overview and discussion of: <ul style="list-style-type: none"> Conservation lab use: orientation, storage and clean up Safety review: (Personal Protective Equipment (PPE), Product Data Sheets (PDS), Materials Safety Data Sheets (MSDS) Review of class assignments and grading Introduction to pattern making and mold making 	Matthew Reiley
2 03/24	Introduction to mold making principles and practice. Begin hands-on learning using resin-bonded sand for half and half molds and silicone rubber to create box and "paint-up" molds.	
3 03/31	Rubber mold making and basic sand mold making continued. Demonstration of wax casting and chasing; student participation.	
4 04/07	Rubber and sand mold making continued. Wax casting and chasing continued. Wax spruing demo and class participation.	
5 04/14	Introduction to masonry repair materials and techniques. Hands-on practice of basic masonry patching and casting techniques. Wax work continues.	
6 04/21	Hands-on practice of basic masonry patching and casting techniques. Finalizing course projects in the lab: presentation and discussion of next steps to complete these small-scale restorations in the field. - Quiz Day	
7 TBD	Optional Central Park and foundry tours- dates TBD.	

• ASSESSMENT •

Students will be evaluated on attendance, completion of assignments, quiz score, participation, and cooperative interaction with the group. Students are expected to consistently help with organization and cleanup, exhibit safety consciousness and to contribute to class discussions.

• ASSIGNMENTS •

During each of the weeks 3-6, four students will present photographs of in situ replacement materials, which they have encountered in their travels around New York City. They will briefly share thoughts on their suitability and performance (3-5 minutes).

Students are encouraged to make additions to the recommended readings germane to the course. They may be eligible for extra credit for additions.

• REQUIRED READING •

Riegl, Alois. "The Modern Cult of Monuments: Its Essence and Its Development." In *Getty Publications Readings in Conservation: Historical and Philosophical Issues in the Conservation of Cultural Heritage*, Edited by Nicholas Stanley Price, 69-83. Los Angeles: Getty Publications, 1996.

Arrhenius, Thordis. "The Fragile Monument: On Alois Riegl's Modern Cult of Monuments." *Nordic Journal of Architectural Research*, no. 4 (2003). <http://www.scribd.com/doc/78618032/Riegl-Modern-Cult-of-Monument> (accessed March 24, 2013)

College Art Association. "Standards and Guidelines: Statement on Standards for the Production and Reproduction of Sculpture". Adopted by the Board of Directors (2013). <http://www.collegeart.org/guidelines/sculpture>

• RECOMMENDED READING •

Ammen, C.W. *The Metalcasters Bible*. Blue Ridge Summit: TAB Books, 1980.

Appelbaum, Barbara. *Conservation Treatment Methodology*. Amsterdam: Elsevier, 2007.

Arrhenius, Thordis. *The Fragile Monument*. Chicago: Artifice Books, 2012.

Braungart, Michael, and William McDonough. *Cradle to Cradle: Remaking the Way We Make Things*. New York: North Point Press, 2002.

Dutton, Denis. *The Art Instinct*. New York: Bloomsbury Press, 2009.

Gale, France S., ed. Brief numbers 4, 16 and 42. In *Preservation Technology Primer: Readings from the APT Bulletin*. Albany: Mount Ida Press, 2008.

McCreight, Tim. *Complete Metalsmith: An Illustrated Handbook*. Worchester: Davis Publishing Company, 1981.

Muñoz Viñas, Salvador. *Contemporary Theory of Conservation*. London: Routledge, 2004.

Stanley Price, Nicholas, Mansfield Kirby Talley and Alessandra Melucco Vaccaro. *Getty Publications Readings in Conservation: Historical and Philosophical Issues in the Conservation of Cultural Heritage*. Edited by Nicholas Stanley Price. Los Angeles: Getty Publications, 1996.

U. S. Department of the Interior. *The Preservation of Historic Architecture: The U.S. Government's Official Guidelines for Preserving Historic Homes*. Guilford: The Lyons Press, 2004.

Other Readings:

Readings from RESTORE Training

Readings from American Institute for the Conservation of Historic and Artistic Works (AIC)

Readings from Association of Preservation Technology (APT)

Readings from ICCROM