Columbia University Graduate School of Architecture, Planning and Preservation (GSAPP)

Conditions Assessment of Built Heritage

Spring 2025, Mondays 2:00 pm - 5:00 pm

Location: Preservation Technology Lab, 655 Schermerhorn, Columbia University in the City of New York

Dates: January 27, February 3, February 10, February 17, February 24, and March 3, 2025

Instructor

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Course Description

This course on condition assessments will take place over six weeks and will present various approaches on how to assess and document conditions based on an understanding of a range of construction typologies and building structures. Methods for assessing and categorizing types of conditions will be introduced and illustrated with case study presentations, including a discussion on how to identify building problems as background to recommending and developing repairs, treatments for historic buildings, and building resiliency. The course will also cover an overview of the parameters, guidelines, and regulations for the New York City Department of Buildings Facade Inspection and Safety Program (FISP). Case studies will include older historic buildings primarily in New York City (e.g., New York Public Library) as well as examples of heritage structures from the recent past.

Course Objectives:

Students will carry out visual examinations using digital documentation and drawing plans and elevations in order to look at each building comprehensively. The aim is to learn more about building resiliency, including how to interpret, diagnose, and assess different types of conditions, distress and understand their relationship to different types of building construction. Understanding various building materials and how they perform over time, especially based on their construction and detailing, will inform how to investigate these materials and develop repairs and treatments that can prolong the life of the building. Students should be able to draw upon the following from this course:

- Develop a basic understanding of the tools used to carry out observations and assessment of building envelope conditions.
- Develop a basic understanding of different types of building materials and related representative building conditions, deterioration, and potential failures.
- Develop a greater understanding of approaches for evaluation of building conditions and building diagnostics.
- Learn how to organize types of conditions and data in descriptive and drawing formats to present findings in a clear and concise manner.
- Learn to collaborate using multi-disciplinary approaches to evaluation of building conditions.
- Present project goals, methodology, and findings through a mid-course PowerPoint presentation and through a final written report that includes documentation of findings through digital documentation referenced to building drawing plans and elevations.

Format:

Through lectures and site visits, students will learn how to identify conditions unique to building forms and construction in New York City and the Tri-state area. Students will learn how building pathology and the need to carry out detailed diagnosis is critical to understanding how to fully assess the building envelope. Students will select and develop their own case studies and will provide a draft report and PowerPoint presentation at mid-course; students will then build off the mid-course results and further develop a final report with drawings as part of their final term project; this conditions assessment report will complement other coursework. It is noted that for the final assignment, teams can be formed comprised of no more than two people to present and to submit the mid-course presentation and final written report.

Requirements:

Students will be expected to work on two class assignments toward the development of a final condition assessment report that will be presented in Class 6. The class will meet once a week on Mondays from 2pm – 5pm in the Preservation Technology Lab for a total of six weeks. Attendance, participation, and collaboration are a large part of the grade and are greatly encouraged. The following items are requirements for the course.

- Attendance in classes and site visits
- Active participation in each class discussions

- Interim mid-course assignment and final presentation with written report and drawing documentation: The final report includes an 8-to-10-page paper (single spacing), with figures and drawing documents. The final report will also be presented to the entire class on the selected building condition assessment project selected by each student. The final report is due February 28, 2025.

Assignments:

Assignments will occur in accordance with the class schedule below. Site visits will be dependent on favorable weather conditions and so may be adjusted accordingly. If site visit dates are changed due to the weather, the schedule will be adjusted accordingly.

The final project presentations are scheduled on the sixth class on March 3, 20225; the final written report should be submitted on or before Friday, March 7, 2025. Final reports should be submitted in electronic copy (PDF) by email to Kyle Normandin and should be submitted no more than 48 hours after the final deadline or credit will not be given for the assignment.

Course Evaluation and Grading:
Grades will be based according to the following scale below:
- Attendance - 20 percent
- Participation and Collaboration - 20 percent
- Interim assignment and presentation - 25 percent
- Final student presentation and condition assessment report with drawings - 35 percent