

HSPV 6010, Spring 2025 Syllabus 1: Course Overview

Instructors:

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Teaching Assistant:

TBA

Meeting Time and Place:

Lectures

Monday 10:15-1:15 Meyerson B2

Demos/Tutorials/Practica

Monday 10:15-1:15 First Unitarian Church of Philadelphia

Office Hours:

By appointment

Course Description

Surveying and recording the physical and cultural characteristics of the built environment including historic buildings, structures, sites, objects, urban districts, and cultural landscapes is a prerequisite of professional preservation best practice. Rigorous and accurate physical documentation provides the platform for:

- **Facilitating property designations.**
- **Developing conservation plans.**
- **Providing a record of change over time.**
- **Serving as a permanent record in cases where demolition may be considered.**
- **Measuring energy performance.**

The primary focus of this course is on metric and photographic recording tools and techniques. Students will also learn how these specialized skills may be employed selectively, leading to more effective stewardship and management: affordability and budget, client needs, and immediate and long-term use of the information.

Goals

Upon successful completion of the course students will:

- **Understand why we record and comprehend the varied roles of visual information-gathering in historic preservation with knowledge of national and international standards.**
- **Understand how we record - the tools, technology, and techniques currently available with their concurrent strengths and limitations.**
- **Understand the differences between the production and use of different types of visual records of historic places, and the implications of these differences.**
- **Understand how accurate recording facilitates good preservation practice and leads to more informed decision-making.**
- **Be able to create rudimentary documentation products, including photographs and measured two-dimensional drawings with the knowledge of industry-standard practice.**

- Be able to request and supervise documentation and recording to be carried out by survey professionals using total stations, laser scanners, and other technologies.
- Be able to manage and compile imagery and data into a coherent document or “product” for “the client”.

Structure

This course will build on skills taught in HSPV 6000 – Documentation I: Archival Research & the Interpretation of Historical Data. This course is fundamentally skills-based, balanced with theoretical knowledge and analysis. **Therefore, many classes will be held in the field.**

Synchronous Lectures

Synchronous lectures will be held in-person in the assigned classroom. Lectures will focus on the theory and methodology of site recording. The course may include guest instruction by national experts and specialists drawn from various fields associated with historic preservation and management of the built environment. Students will become familiar with current survey technologies including hand measurement and drawing, photography, photogrammetry, laser scanning, and point cloud softwares.

Asynchronous Lectures

A series of asynchronous lectures have been prepared which are required homework. These videos cover material associated with tools and techniques in recording ranging from the introductory to the advanced. Homework lectures must be completed during the week they are assigned

Preliminary Drawing Practice

During weeks 1, 2, and 3 students will complete, as homework, three short drawing exercises at their own location.

In-class Field Work

Fieldwork will be divided between a series of exercises and a final project. Preliminary field work will be conducted on campus. Project field work will be conducted at First Unitarian Church.

Exercises: Hands-on exercises will allow students to learn basic recording skills and current tools.

- **Survey instruments and tools**
- **Photography**
- **Field measurement**
- **Hand and Computer Aided Design drawing**
- **Professional grade deliverables**

While students may be familiar with these skills from previous coursework or field experience, it is expected that all students will work on improving each of these skills, regardless of comfort level or prior experience.

Final Project: Students working in small groups will safely record a section of the building by appropriate means. This will include field notes, measured drawings, and photographs.

Prerequisites/Equipment Requirements

The most recent versions of **AutoCAD** and **Adobe Photoshop** should be installed on students' laptops on or before the start of the course. Free copies of AutoCAD are available for download by registering at the Autodesk Education Community (<http://students.autodesk.com>)

AutoCAD: This is not a course focused on the learning of AutoCAD and students are expected to know the basic two-dimensional drawing features of the software. All required assignments that are to be digitized can be done using AutoCAD; however, alternative ways of creating drawings will be considered after discussion and approval from class faculty. Additional CAD tutoring during currently unscheduled evening sessions may be available if there is sufficient demand.

Digital photography: each student should have access to and be familiar with:

- A camera that has least 18-megapixel resolution, has full manual control of focus, aperture, and shutter speed, and can deliver RAW format images. Three digital cameras will be available to check-out. Schedule any planned use of them well in advance and retain for as short a time as possible.
- A tripod. You are encouraged to purchase your own, but five will be available for check-out.
- An 18% gray card
- If your camera does not have built-in level you will need small level or combination square.
- Access to professional-quality printing is necessary. Printing can be accomplished on the Meyerson plotters or at an off-campus lab (e.g., at PhotoLounge 130 S 17th St, Philadelphia, PA 19103 <https://www.myphotolounge.com>). Multiple prints will be required for assignments. Students who are not familiar with the school plotters must get proper instruction through IT before they may use the plotters.

Requirements

- **Students are required to view each asynchronous lecture by the date given on the syllabus.**
- **Students are expected to attend all lectures, demonstrations, and working sessions.**
- **Absences will generally be excused only for emergencies.**
- **All practicum exercises are to be submitted on the due dates in the syllabus.**
- **Late work will be penalized depending on the degree of lateness.**
- **Representation of someone else's work as your own, without proper attribution, is a serious breach of these guidelines.**
- **Cell phones are prohibited during class and are to be put away except during break time.**

Assignments/Submissions: For due dates see Syllabus 2: Schedule

Except as noted, all submissions must be made to the appropriate folder in BOX.

Practice sessions: to be completed at home.

For each session, make one free-hand drawing and one photograph of the object or space. These will be completed on minimum 8.5x11 unlined paper. Images of the drawings and accompanying photographs must be submitted to Box for review by faculty. Submission to Box will be by good quality photos or scans. Comments will be provided by faculty via email and drawings will not be graded; however, lack of submission will impact final grade.

- **PS.1 A chair/table,**
- **PS.2 Interior of a room**

Assignment 1: Measurement/Drawing exercise at Fisher Fine Art Library

Measurement and drawing will be accomplished during the class sessions at Fisher

- **Submission must include: 1. elevation, 2. section, 3. plan**
- **Deliverables must be a survey notes, scaled hand drawings and PDFs from CAD software**

Assignment 2: Photography exercise at Fisher

Shooting will be accomplished during the class sessions at Fisher

- **Submission must include two views: One interior and one exterior**
- **Deliverables (digital only): full size tiff, reduced size jpeg, reduced size jpeg on HABS template format**

Assignment 3: Photography of an individual site

- **A set of five photographs of chosen site, delivered as full-size tiff, small-size jpeg, and in HABS template format. Photographs must meet HSPV 6010 Photography Guidelines.**
1. Exterior elevation 2. Exterior context view 3. Exterior perspective view
4. Exterior detail view 5. One additional view
- **Two photographs must be printed on 8.5x11 photo quality paper with pigment ink using HABS template format**
- **Site must be off-campus, approved by Joe Elliott**
- **For more detail see separate handout: "Assignment 3: Photography of and Individual Site"**

Assignment 4: Final project: Each group will work on one area of Weitzman Hall to produce a package containing the following:

- **Set of large-scale drawings: plan, section, and elevation and detail using AutoCAD.**
- **Set of at least 10 photographs that thoroughly record the area as a stand -alone package**
- **Additional photographs will be made as necessary to provide photogrammetric data for drawing production, and other detail views as needed for addition to drawing set**
- **Each student in the group will be responsible for at least one final drawing, one photo.**
- **Drawings must meet Penn HSPV Drawing Standards.**
- **Photographs meet HSPV 601 Photography Guidelines.**
- **The drawing set and photograph set will be delivered as PDF and as prints ready for pin-up at final review.**

Grading

Final grade for the course will be determined as follows:

Assignment 1 and 2: 15%

Assignment 3: 15%

Assignment 4: 60%

Class attendance and commitment (includes Assignment 5): 10%

The first three assignments will be graded on an individual basis. The final project assignment will be a group grade.

In most cases assignments can be resubmitted after grades and comments have been determined. Resubmission allows people to make changes to their work based on the comments received in order to achieve a higher grade.

Grading will be in accordance with general academic policies: a grade of A/A- will represent exceptional work, B/B+ will represent good work that meets the academic standard set for the course, and B- will represent work that is just under the established standard. C and C+ are barely passing for graduate courses and will indicate work that is less than satisfactory. Failure to meet the minimum requirements will result in an F. All work is to be delivered on the dates described in the syllabus or agreed upon in class if changed. Students are asked to contribute to a positive learning environment and to review the school's guidelines on academic integrity at:

http://www.upenn.edu/academicintegrity/ai_codeofacademicintegrity.html

Disability Services: Weingarten Center

The University of Pennsylvania is committed to the accessibility of its programs and services. Students with a disability or medical condition can request reasonable accommodations through the Weingarten Center website. Disability Services determines accommodations on an individualized basis through an interactive process, including a meeting with the student and a review of their disability documentation. Students who have approved accommodations are encouraged to notify their faculty members and share their accommodation letters at the start of each semester. The Weingarten Center offers a variety of resources to support all Penn students in reaching their academic goals. All services are free and confidential. To contact the Weingarten Center, call 215-573-9235. The office is located in Stouffer Commons, 3702 Spruce Street, Suite 300.

Learning consultations and learning strategies workshops support students in developing more efficient and effective study skills and learning strategies. Learning specialists work with undergraduate, graduate, and professional students to address time and project management, academic reading and writing, note-taking, problem-solving, exam preparation, test-taking, self-regulation, and flexibility.

Undergraduates can also take advantage of free on-campus tutoring for many Penn courses in both drop-in and weekly contract formats. Tutoring may be individual or in small groups. Tutors will assist with applying course information, understanding key concepts, and developing course-specific strategies. Tutoring support is available throughout the term but is best accessed early in the semester.

A Note on the “Green Box” and other Available Tools

The department has available a set of recording tools located in a large green cabinet located in the 4th-floor studio. This cabinet has all of the tools a student would need in order to complete assignments for this class, however, the supply is limited. While there are a large number of tape measures, there are only three SLR cameras and only one total station. If you want to use any of this equipment you MUST schedule it in advance through the course teaching assistant. Our TA will specify the weekly hours during which such equipment may be borrowed and returned. It is the responsibility of each student who checks out the equipment to make sure it is returned on time and in good condition; damaged or lost equipment will be repaired or replaced at the student's expense.

In addition to the Green Box, there is a Media Lab offered to all students at the University, located in Van Pelt Library. This facility, known as the Vitale Center, has equipment that may be checked out. Below is a link that covers available equipment:

<https://commons.library.upenn.edu/equipment-lending>

This facility is run by the university and is independent of the School of Design. Any equipment borrowed must be done on your own, independent of the teaching assistant for this class. The website for this center is below. Please make sure you check information about its lending policies and how to borrow equipment at the following address:

<https://commons.library.upenn.edu/how-reserve-equipment>

Bibliography and Recommended Readings:

There is a large number of digital book-formatted resources in the course folder. Please use them for guidance and inspiration for all class-related work.

Introduction to Recording, Documentation, and Information Management

Letellier, Robin, Werner Schmid, and François LeBlanc. 2007. Recording, Documentation, and Information Management for the Conservation of Heritage Places: Guiding Principles. Los Angeles, CA: Getty Conservation Institute.
http://hdl.handle.net/10020/gci_pubs/recordim

Stulens, Anouk, Meul, Veerle, and Lipovec, Heritage Recording and Information Management as a Tool for Historic Preservation, *Change Over Time*, 1.2:58-76, 2012

History and Practice of Recording at the National Park Service

American Place: The Historic American Buildings Survey at Seventy-five Years. 2008.
<https://www.nps.gov/hdp/habs/AmericanPlace.pdf>

Burns, John. 1989. Recording Historic Buildings. Washington, DC: American Institute of Architecture Press.

HABS/HAER Guidelines for Recording Historic Sites and Structures Using Computer-Aided Drafting (CAD)
<https://www.nps.gov/hdp/standards/cadguide.pdf>

Large Scale Recording

Hansen, Janet and Sara Delgadillo Cruz, "Big City: Big Data, Los Angeles's Historic Resources," in *Preservation and the New Data Landscape*, edited by Erica Avrami. New York: Columbia University Press, 2019.

Hansen, Janet and Sara Delgadillo Cruz, "'Los Angeles's Historic Contexts: Pathways to Inclusion in Preservation,'" in *Preservation and Social Inclusion*, edited by Erica Avrami. New York: Columbia University Press, 2020.

Barton, Carrie, Adam Cox, Sara Delgadillo Cruz, and Janet Hansen, "Cultural Heritage Inventory Implementations: The Flexibility of the Arches System" in the *Association for Preservation Technology Bulletin*, January 2018.

"Cultural heritage inventory systems for posterity and conservation", the *Journal of Cultural Heritage Management and Sustainable Development*, Spring 2016

Howe, Kathryn Welch, The Los Angeles Historic Survey Report, Los Angeles, The Getty Conservation Institute, 2008

National Register Bulletin: Guidelines for Local Surveys: A Basis for Preservation Planning

https://www.nps.gov/subjects/nationalregister/upload/NRB24-Complete_Part1.pdf

https://www.nps.gov/subjects/nationalregister/upload/NRB24-Complete_Part2.pdf

Metric Survey Techniques

Blake, Bill. 2011. Metric Conditions Records: Does the Capture Method or the Information Need Determine the Performance of 3D Heritage Records? *Change Over Time* 1.2:168-183.

Dallas, R. 2007. Tools Overview, 5-9. In R. Eppich and A. Chabbi, *Recording Illustrated Examples*.

Evans, Robin. 1989. Architectural Projection, 18-35. In *Architecture and its Image*, E. Blau and E. Kaufman, eds. Montreal: Canadian Centre for Architecture.

Historic England, 3D Laser Scanning for Heritage (2nd ed) 2011.

http://content.historicengland.org.uk/images-books/publications/3d-laser-scanning-heritage2/3D_Laser_Scanning_final_low-res.pdf/

Historic England, Photogrammetric Applications for Cultural Heritage, 2017.

<https://content.historicengland.org.uk/images-books/publications/photogrammetric-applications-for-cultural-heritage/heag066-photogrammetric-applications-cultural-heritage.pdf/>

UAV Rules:

[https://provost.upenn.edu/policies/pennbook/2017/02/22/guidelines-for-the-operation-of-unmanned-aircraft-systems-at-the-university-of-pennsylvania\)](https://provost.upenn.edu/policies/pennbook/2017/02/22/guidelines-for-the-operation-of-unmanned-aircraft-systems-at-the-university-of-pennsylvania)

[https://thedroneauthority.org/drone-licence/?gclid=CjwKCAiApJnRBRBlEiwAPTgmXOGhybSSxN2j_S1KGBgedsM4ZMtFtq0BM_YhvbYC7Azw6qAih2mXiBoCWQUQAvD_BwE\).](https://thedroneauthority.org/drone-licence/?gclid=CjwKCAiApJnRBRBlEiwAPTgmXOGhybSSxN2j_S1KGBgedsM4ZMtFtq0BM_YhvbYC7Azw6qAih2mXiBoCWQUQAvD_BwE))

Photography

London, Barbara and Stone, Jim. 2012. *A Short Course in Digital Photography*. Upper Saddle River, NJ: Prentice Hall.

HABS Photo Standards <https://www.nps.gov/hdp/standards/habsguidelines.htm>

Other useful readings

1. Delgado Yanes, Magali and Redondo Dominguez, Ernest. 2005. *Freehand Drawing for Architects and Interior Designers*. New York: W. W. Norton
2. Historic England Publications free Downloads:
 - a. Presentation of Historic Buildings in CAD
 - b. Understanding Historic Buildings
 - c. Drawing for Understanding
 - d. Metric Survey Specifications for Cultural Heritage
 - e. Photogrammetric Applications for Cultural Heritage
 - f. 3D Laser Scanning for Heritage
 - g. Traversing the Past
3. *Traditional Details for Building Restoration, Renovation, and Rehabilitation*. 1998. [From the 1932-1951 Editions of Architectural Graphic Standards]. New York: Wiley.
1. Bianca, S. and Jodidio, P., eds. 2004. *Cairo, Revitalizing a Historic Metropolis*. The Aga Khan Trust for Culture.
2. Blau, Eve. 1989. Patterns of Fact, 36-57. In *Architecture and its Image*, E. Blau and E. Kaufman, eds. Montreal: Canadian Center for Architecture.

3. Chronopoulos, Themis. 2013. Robert Moses and the Visual Dimension of Physical Disorder: Efforts to Demonstrate Urban Blight in the Age of Slum Clearance. *Journal of Planning History* 13: 207-233.
4. Clark, Kate. 2001. *Informed Conservation. Understanding Historic Buildings and their Landscapes for Conservation*. London: English Heritage.
5. *Measured and Drawn*. 2003. Swindon: English Heritage.
6. Woods, Mary. 2007, Introduction (xvii-xxxiii) and Conclusion (257-271.) *Beyond the Architect's Eye*.

Important Websites:

1. Historic England. Research Methods (informative website with pub downloads), <https://historicengland.org.uk/advice/technical-advice/recording-heritage/>
2. The Getty Conservation Institute. Heritage Recording and Documentation, <http://www.getty.edu/conservation/search/browseresults?d=rec>
3. The International Committee of Architectural Photogrammetry, <http://cipa.icomos.org/>
4. The International Society for Photogrammetry and Remote Sensing, <http://www.isprs.org/>
5. NPS Heritage Documentation Programs, <https://www.nps.gov/hdp/about.htm>
6. National Register Bulletin: How to Complete the Multiple Property Documentation Form - <https://www.nps.gov/nr/publications/bulletins/nrb16b/>
7. National Register Bulletin: Guidelines for Local Surveys: A Basis for Preservation Planning - <https://www.nps.gov/nr/publications/bulletins/nrb24/>
8. English Heritage, *3D Laser Scanning for Heritage* (2nd ed) 2011. http://content.historicengland.org.uk/images-books/publications/3d-laser-scanning-heritage2/3D_Laser_Scanning_final_low-res.pdf/
9. National Register Bulletin: Guidelines for Local Surveys: A Basis for Preservation Planning - <https://www.nps.gov/nr/publications/bulletins/nrb24/>
10. TSA Survey Association – Guide for Measured Buildings <https://www.tsa-uk.org.uk/downloads/>