HSPV 601, Spring 2023
Syllabus 1: Course Overview

Instructors:

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Meeting Time and Place:

Lectures	**Monday 10:15-1:15 MCNEIL 395**
Demos/Tutorials/Practica	**Monday 10:15-1:15 / Check Class Schedule for Details**
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 recording tools and techniques. Students will also learn how these specialized skills may be employed selectively and self-critically, 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 600 – Documentation I: Archival Research & the Interpretation of Historical Data. The 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.

Preliminary Drawing Practice

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

In-class Field Work

Fieldwork will be divided between a series of exercises and a final project.

Fieldwork will be conducted at Holy Apostles and the Mediator Episcopal Church (HAM). HAM is a historically African American parish located at 260 S 51st St, Philadelphia, PA. It is a large structure with plenty of room for social distancing. We have an ongoing relationship with the church and have conducted fieldwork there for several years. For background on the church please visit: https://www.hamphilly.org/history.

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 SLR camera with at least 18-megapixel resolution. Three digital SLRs will be available to check-out, but 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
- A 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

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 HAM

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

- **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 HAM

Shooting will be accomplished during the class sessions at HAM

- **A set of six photographs of HAM, delivered as full-size tiff, small-size jpeg, and in HABS template format. Photographs must meet HSPV 601 Photography Guidelines.**
  - **Exterior elevation**
  - **Exterior context view**
  - **Exterior perspective view**
  - **Exterior detail view of window or door**
  - **Interior elevation of the door or window you are drawing (if window must expose for glass).**
  - **Interior detail view of the door or window you are drawing**

Assignment 3: Final project at HAM (produced by groups of 3+ students)

- **Set of large-scale drawings: plan, section, and elevation and detail using AutoCAD.**
- **Minimum of 9 photographs, including tiff, jpeg, and HABS standard prints for each.**
- **Each student in the group will be responsible for at least one final drawing, two photos.**
- **Drawings must meet Penn HSPV Drawing Standards.**
- **Photographs meet HSPV 601 Photography Guidelines.**
- **If applicable, rectified image produced from multiple views, using appropriate technology as determined by instructors.**

Grading

Each of the first two assignments (on-site drawing and photography) will count 15% for a total of 30% (2 assignments x 15%). The final project will be 60%. 10% will be given for class attendance and commitment to the work.

The first two 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

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://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/