

University of Mary Washington  
Department of Historic Preservation

Computer Applications in Historic Preservation HISP 345-01  
Spring 2019  
Combs Hall #011  
11:00 – 12:15 pm Tuesday and Thursday

Instructor: Mr. Spencer  
Office: Combs Hall #132  
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phone: (540) 654-1311

Office hours:  
Monday and Wednesday, 9-10 am  
Tuesday and Thursday, 9-11 am  
Or by appointment

**I. Course Outline and Objectives:**

This course will explore some of the computer programs being used today in the field of Historic Preservation. Students will not only be exposed to these programs but will be taught how to utilize them as they pertain to certain preservation related scenarios. The class will culminate in a project that will seek to integrate the various skill sets and programs learned to accomplish a set preservation objective. This project will be presented at the end of the class during the final exam period noted.

Objectives:

1. Obtain basic competencies in the following software/hardware as they pertain to Historic Preservation:
  - a. AutoCAD
  - b. PhoToPlan, TachyCAD, and a Leica Total Station (documentation)
  - c. Agisoft (documentation/3-D modeling)
  - d. SketchUP (3-D modeling)
  - e. Unity (modeling and animation software)
2. Integrating and adapting skill sets and program knowledge to address historic preservation issues.
3. Professional dissemination of results through presentations, graphics and user friendly computer interaction.

**II. Text:**

**Required:**

No required text

\*\*\*Class readings will be distributed in class or will be posted online through Canvas.

### III. Grading Scale:

As prescribed by the University of Mary Washington:

A	“Unusual Excellence”	(93% or higher = A ; 90-92% = A-)
B	“Work Distinctly Above Average”	(87-89% = B+ ; 83-86% = B ; 80-82% = B-)
C	“Work of Average Quality”	(77-79% = C+ ; 73-76% = C ; 70-72% = C-)
D	“Work of Below Average Quality”	(67-69% = D+ ; 60-66% = D)
F	“Failure, No Credit”	(0-59% = F)

\*If at midterm a student has a grade of D (a 66% or less) a “U” (unsatisfactory) will be entered.

### IV. Assignments:

As the assignments in this class will be computer based, students will need to turn in their assignments in the correct digital format. It is the responsibility of the student to correctly format as well as save their work. Students should refrain from storing any valuable work on the Department computers in Combs #011.

**Assignment #1, AutoCAD:** Student will generate a series of small drawings relating to building and landscape documentation using AutoCAD. These drawings will demonstrate the following:

- Basic commands
- Advanced commands
- Landscape/Property Boundaries

**Assignment #2, Surveying Equipment and Photorectification:** Students will use the reflector less Leica Total Station in conjunction with TachyCAD to obtain XYZ coordinates of a particular structure or site. This data will then be used to rectify images using PhoToPlan thereby allowing accurate measurements and drawings to be obtained from the images.

**Assignment #3, Agisoft Documentation:** Student will use department cameras in conjunction with Agisoft software to create a 3-D model. This model will then be loaded into SketchFAB for dissemination on the Center’s Facebook page.

**Assignment #4, SketchUp:** Students will create a SketchUp model of an historic building in Fredericksburg.

### **Assignment #5, Preservation Interpretation:**

**Option 1:** Using archival and archaeological information students will model a now vanished building using both SketchUp and Agisoft. (group work)

**Option 2:** Students will use agisoft to model using Agisoft an area used for a museum exhibition. Student will then model exhibits using sketchUp and Agisoft eventually combining the two models to create virtual walkthrough/exhibit. (group work)

### **V. Tests and Examinations:**

No formal tests or exams. The final project will constitute the final exam for the class.

### **VI. Participation & Attendance:**

The participation component of this class goes hand in hand with attendance. If you are not at class you will not be able to participate. For definition purposes participation for this class is not limited to speaking but also includes participation through observation, listening, and being physically present. Students need to inform the instructor ahead of time should they need to miss a class for emergency purposes. Proper documentation of a missed class may be required and should not be taken by the student as a reflection on their character but rather as policy compliance.

### **VII. Grading:**

Grading will be based on a number of factors in an effort to be fair, transparent, and to provide the best possible feedback to the student. Completeness and accuracy of the assignments will play a large factor in the final grade as will legibility.

### **VIII. Late Assignments:**

Assignments are due at the beginning of class on the date noted in the syllabus. Unexcused late work will result in the loss of ten points (a full letter grade), if handed in after the start of class and an additional ten points for every 24 hrs overdue. **NO EXCEPTIONS.** Should a student be absent for whatever reason they will need to e-mail the assignment to the instructor before class begins on the date the assignment is due. The following class, or the next class they physically attend, they will need to hand in a **hard copy** of the assignment. An absence does not excuse a late assignment. Excused late work is determined on a case by case basis by the instructor before the assignments due date. If you have a valid excuse and an assignment conflict, please contact me as soon as possible. Documentation of your excuse may be required.

### **IX. Final Grade:**

The final grade will be based on the following;

Assignment #1	15%
Assignment #2	20%
Assignment #3	10%
Assignment #4	20%
<u>Assignment #5</u>	<u>35%</u>
<b>Total</b>	<b>100%</b>

## **X. Honor Code:**

You are expected to follow this, no exceptions. All graded assignment should be pledged and signed. Please see me if you have any questions regarding what is and is not considered plagiarism or cheating.

## **XI. Classroom Behavior:**

Students **ARE** expected to participate in class discussions and lectures as well as treat both the teacher and students respectfully. All cell phones should be turned off and absolutely no text messaging, twittering or blogging. Furthermore, students should conduct themselves in a manner that promotes a good learning environment by refraining from actions that might disrupt the class. Some examples, although not exhaustive, of inappropriate behavior include sleeping during class, talking during class, loud outbursts, reading the newspaper, the use of profanity, and showing up to class intoxicated. Students may be asked to leave class should these rules not be followed.

## **XII. Office of Disability Services:**

The Office of Disability Services has been designated by the University of Mary Washington as the primary office to guide, counsel, and assist students with disabilities. If you receive services through that office and require accommodations for this class, please make an appointment with me as soon as possible to discuss your approved accommodations. I will hold any information you share with me in strictest confidence unless you give me permission to do otherwise. If you have not made contact with the Office of Disability Services and have reasonable accommodation needs, I will be happy to help you contact them. The office will require appropriate documentation of a disability.

Office of Disability Services  
401 Lee Hall  
540-654-1266  
[ods@umw.edu](mailto:ods@umw.edu)

**XIII. Class Schedule:**

<b>Date</b>	<b>Subject</b>	<b>Homework</b>	<b>Assignments/Exams (due on date listed)</b>
1/15	Syllabi Review, Computer Application Possibilities		
1/17	AutoCAD	Project #1 (Part I) assigned	
1/22	AutoCAD		
1/24	AutoCAD	Project #1 (Part II) assigned	<b>Project #1 (Part I)</b>
1/29	AutoCAD		
1/31	AutoCAD	Project #1 (Part III) assigned	<b>Project #1 (Part II)</b>
2/5	AutoCAD		
2/7	TachyCAD	“Technical Information about TachyCAD” pp. all ( <b>online</b> ) Project #2 assigned	<b>Project #1 (Part III)</b>
2/12	TachyCAD (group sessions)	“St. Johannis Chapel, Kubit Case Study” pp all ( <b>online</b> )	
2/14	PhoToPlan (introduction)	“Technical Information about PhoToPlan” pp. all ( <b>online</b> ) In class work	
2/19	PhoToPlan (coordinates)	“Shedding Light on the History of Glass Hall, Kubit Case Study” pp. all ( <b>online</b> )	
2/21	PhoToPlan (geometry)		
2/26	Agisoft/SketchFAB	Project #3 assigned	
2/28	Agisoft/SketchFAB		<b>Project #2 due</b>
3/5-3/7	<b>Spring Break, no class</b>		
3/12	SketchUp (intro)	Project #4 assigned	
3/14	SketchUp (basic)		<b>Project #3 due</b>
3/19	SketchUp (basic)		
3/21	SketchUp (advanced)		
3/26	SketchUp (advanced)		
3/28	SketchUp (class critique)		

4/2	Preservation Interpretation (introduction)	Project #5 assigned	<b>Project #4 due</b>
4/4	<b>No Class</b>		
4/9	Preservation Interpretation (research)		
4/11	Preservation Interpretation (concept)		
4/16	Preservation Interpretation (modeling)		
4/18	Preservation Interpretation (desk critique, Q&A)		
4/23	Presentations		
4/25	Unity		
4/30	<b>Final Exam (Project #5 due) @ 2:30</b>		