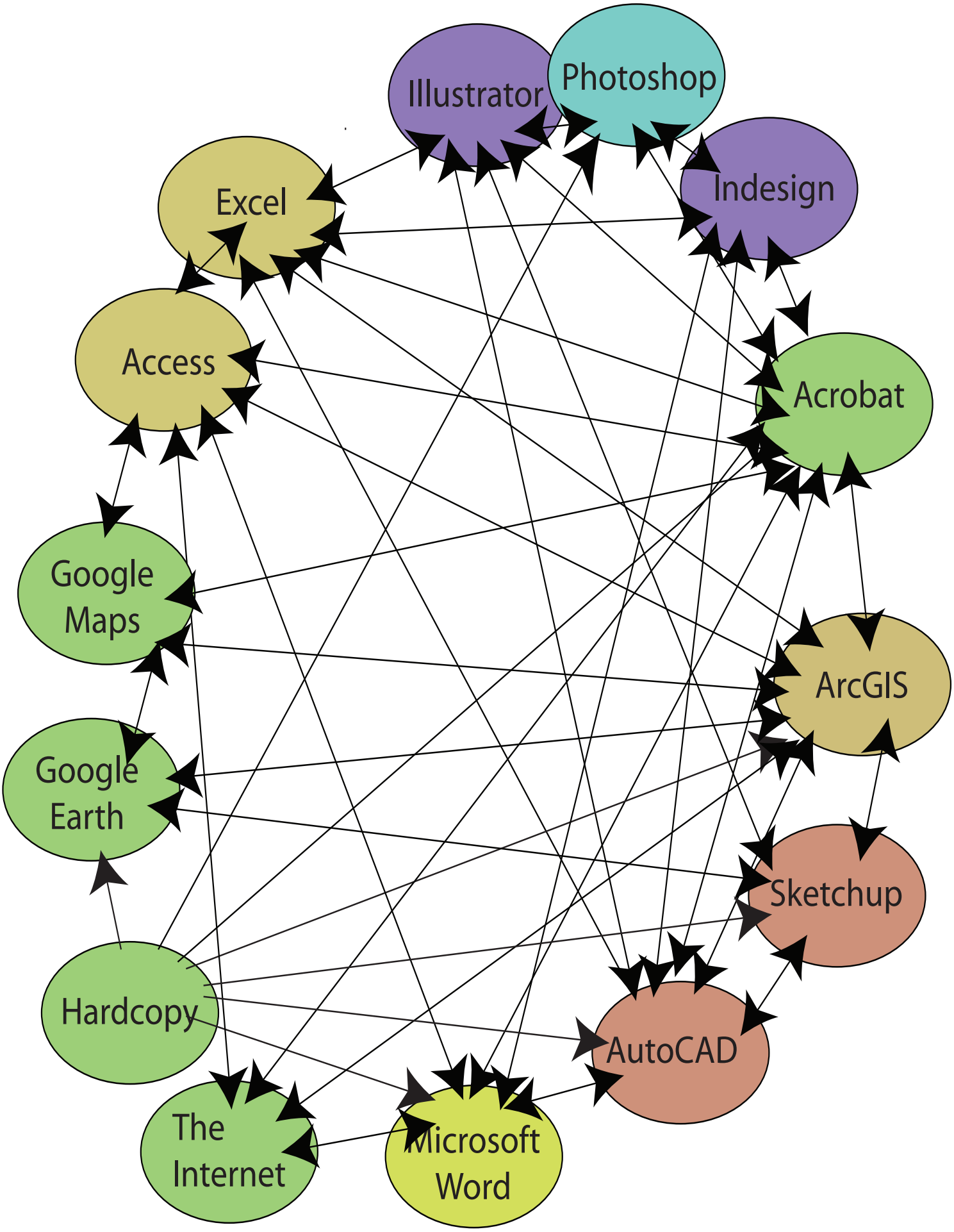
Tame your technology …
or it will become your master.

In today's highly connected world,
you must define boundaries around
your time.

Lee J. Colan, 107 Ways to Stick to It


Illustrator
Photoshop
Indesign
Excel
Access
Acrobat
Google Maps
ArcGIS
Google Earth
Sketchup
Hardcopy
AutoCAD
The Internet
Microsoft Word

Course Syllabus

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INTRODUCTION

Regardless of how we identify our individual roles in Heritage Management and its related fields, the underlying requirement for all of us is the proper collection, management and distribution of information. Preservationists are first and foremost a service industry. We provide!

> CORRECTING MISTAKES HELPS TO ENHANCE COMFORT LEVEL AND BEING COMFORTABLE WITH TECHNOLOGY MAKES CHOOSING THE RIGHT SOFTWARE EASIER.

As we all continue to catapult into the digital age, the ability to maximize the large quantity of information generated from any well-documented site or project, through well conceived and knowledgeable selection, application and linkage of digital technology is a critical skill that Heritage Management professionals must have.

The use of digital tools can improve historical research efficiency; the speed and accuracy of surveys; the quantity and quality of archival information directly linked to site features; the documentation of conditions, treatments and maintenance; the mapping and spatial location of historic sites, or the ability to communicate with the ever expanding digital world. Additionally, digital tools can recover previously unavailable information from historic maps, documents and images (data collection and conversion). With powerful analytical capabilities, these digital tools can improve our understanding of the information (data management and analysis) and en-

able the production of creative communication vehicles for project discussions, funding proposals, reports and interpretive presentations for public outreach (data distribution).

While all this is critical to success in the current world of Heritage Management, the ability to simply use the technology is not enough. In order to maximize these tools we need to make sure that we understand the underlying concepts on which softwares are built, and in turn, know why we apply them and how we choose the right solution for a problem. Softwares are more than just a set of buttons. Each one does things in specific ways for specific reasons based on a set of step provided to you by an instruction manual, or worse, Youtube. They are tools to collect, process, manage, and disseminate our information.

WITH POWERFUL ANALYTICAL CAPABILITIES, THESE TOOLS CAN IMPROVE OUR UNDERSTANDING OF INFORMATION AND ENABLE CREATIVE PRODUCTION...

For the same reason that in the pre-digital age we didn't treat a note to a client the same way we treated an historic map, we need to make sure that we identify our data for what it is, determine what we want to do with it, and then decide what the proper software is for processing it. Fortunately most people are smart enough now to not use Microsoft Word to both write letters to clients and to save photographs, although I've seen it done. With digital fluency a person can know what is the right software and what are the best ways to use it to its maximum potential. For example a person can use a digitized paper map in Adobe InDesign for a final report layout, in Adobe Photoshop for applying metadata to that image, in Auto CAD to vectorize that map and in ArcGIS to serve as an historic background in conjunction with other spatial data just to name a few. All of the uses mentioned above are good ones but for different people in the same office, will they, and should they all be accessing the exact same digital map file on a server? It is answers to these questions that make a difference in good digital data management.

In Heritage Management we are taught to think like an archivist who's primary role is to make good choices and not to pack rat, but do we think that way digitally? With the expanding rate and reduced cost of storage space we have to remember that just because we can store everything doesn't mean we should store everything. To really have the ability to con-

tribute in a significant and intelligent way, people in the field must be able to set limits within the technical world. When is too much really too much? What do you keep and what do you get rid of? How many copies of a file should be kept and which copy should be considered the "most important" one? Just because you can take a 50 megapixel image, doesn't mean that your client wants it or your softwares can handle it. If you can take 5000

photographs of a site does it mean that you should keep them all? If you can provide your client a database for a project with all of your collected data, but they can't understand the database design then what good does it do for them? LIDAR and laser scanning are all the rage right now, but the files can be massive and difficult to convert to something of value. In the end, too much can be a huge waste of time and money.

This class provides an introduction to using digital tools for addressing three fundamental concepts.

1. **collection**
2. **analysis (management /processing)**
3. **dissemination (presentation / communication)**

These three ideas existed before the digital age and although they are critical, application can not be ignored. Softwares need to be learned and used in order to be useful. Software is not like riding a bicycle. Either use it or lose it! Many of the following ubiquitous softwares will be discussed in greater depth and used in this class.

- **Adobe Photoshop**
- **Adobe Illustrator**
- **Acrobat**
- **Adobe InDesign**
- **Microsoft Access**
- **Microsoft Excel**
- **Google Earth**
- **ESRI ArcGIS**

While many people from different areas of Heritage Management have had different levels of instruction with different software programs for different purposes, it is a goal that this class will help both the beginner, as well as

the seasoned veteran by addressing not just the softwares, but the concepts associated with using softwares in Heritage Management in the digital age. The intent is that in the end you have both a set of useful software tools as well as a better ability to make good decisions about what to use, how to use it and when to use it.

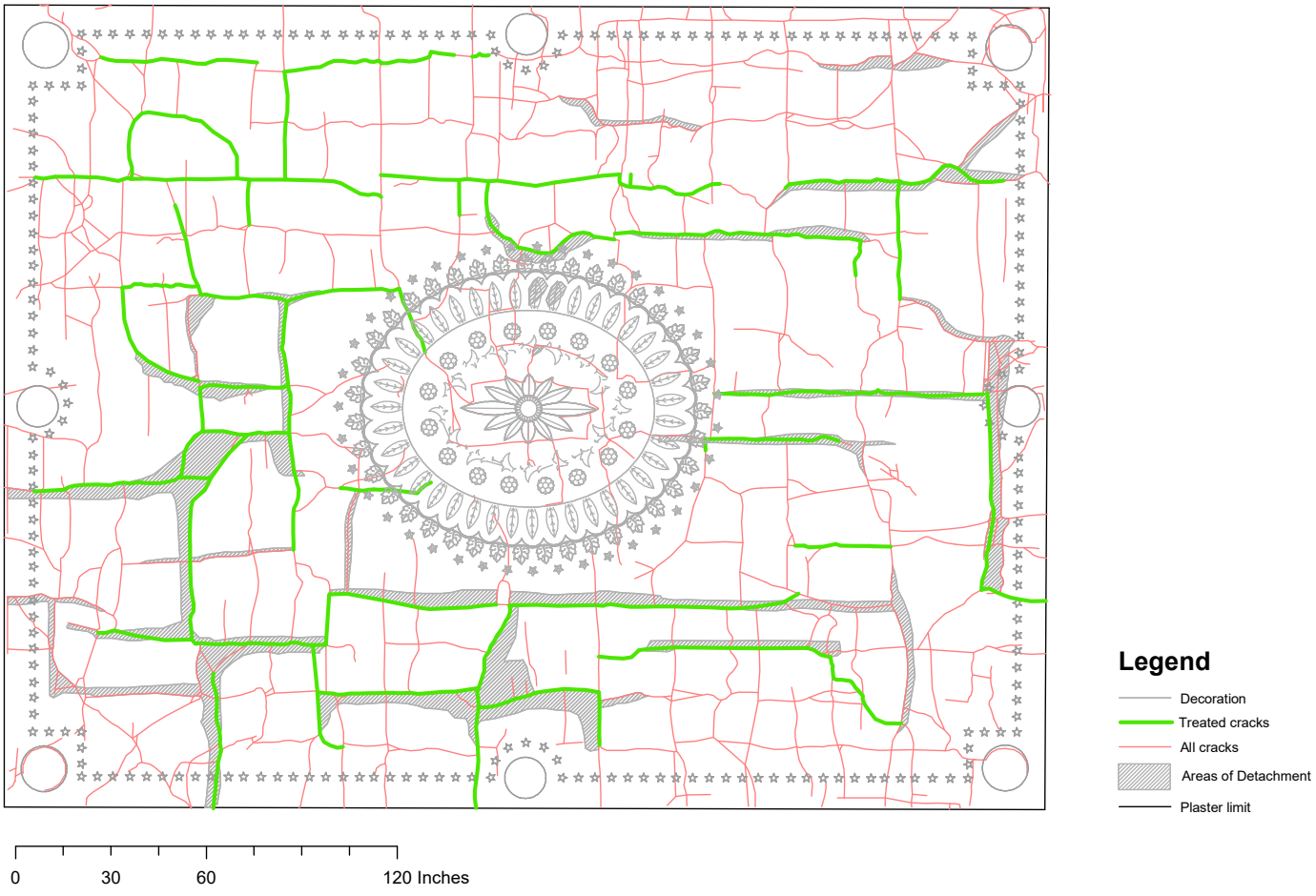
By no means is this class just "Button Pushing 101" nor is it intended to make each individual fully proficient in any of the software covered. An entire semester could be used to teach any one of these softwares and it is therefore your job to continue the learning process. The class will discuss, or mention a large number of different softwares, many of which are very common and others which are not. Some of the software mentioned may not even be available to everyone, but having access to all the softwares mentioned is not critical to understanding the concepts that they convey.

This is a methodology and concepts class designed to help you better understand the integration of available softwares as tools, but most important, this is a skills class. As any carpenter knows, the benefits of learning to use tools while building a house allows the individual to learn both the use of the tool as well as the process of building a house. It is the conscious association of tool and product that makes the carpenter a more powerful asset to a company. Like construction, anyone who learns softwares outside the context of their field or scope of understanding may have difficulty applying what they have learned without a clear connection. Any carpenter also knows that the only way to get good at using a hammer is to use it over and over again.

Since the approach to any client request is not controlled by a systematic sequencing of individual tools (when building a house you don't use a hammer until all the nails are driven and then pick up a saw), the use of software in this class may not be sequential. This means that we may use the same software more than once at different times in the course based on the need for that software. The obvious goal of this is to introduce you to the tools available while building the "house". Clearly the tools taught can be applied in a wide variety of settings, and it is through your creative

approach to these tools in future settings which will allow you to see the potential for an application. If you have learned to use tools to build a house, it is not a fantastic leap for a creative person to figure out how to use those same tools to build a boat.

Several softwares will be discussed and used during the class. Additional instruction sheets are provided in written form with content provided for step-by-step processing This class is not intended to make anyone fully proficient in any of the software covered. Instead it is designed to help foster confidence with digital technology in heritage management people. The exercises each loosely approach a set of problems found commonly in different areas of our fields to arrive at a meaningful and communicative



output clearly with a focus on the modern age of computers. Although the exercises are intended to provide experience and understanding of a set of digital tools they are also designed to introduce students to ideas and difficulties within the field by working from real interrelated data and expectations that would exist in heritage management with or without computers. As such the class focuses not just on software understanding but also on concepts, content, quality of output as well as creativity, helping people to produce reports and products that are well executed, both as far as content is concerned, as well as design: products that would be expected in any professional setting.

If nothing else, this course is about process. It is important to remember that getting the correct answer is not always the shortest path to competency. Mistakes will be made by everyone and pitfalls are part of the process. Correcting those mistakes, however, helps to enhance comfort level and being comfortable with technology makes choosing the right software easier. By having a better understanding of the integrated nature of different software programs and the concepts behind them, you can choose a certain software not because it's what you think you know, but because you know it's the right one to use for the job.

PRE-REQUIREMENTS

There are NO pre-requirements! A resource list of books, helpful websites, and other training resources available may be provided for continued instruction. Additionally, the best single resource for solving your technology problems, is technology itself. Just Google it!

CLASS SCHEDULE

Attendance of all classes and labs is required

CLASS / LECTURE

Thursday 9:30 am 11:00

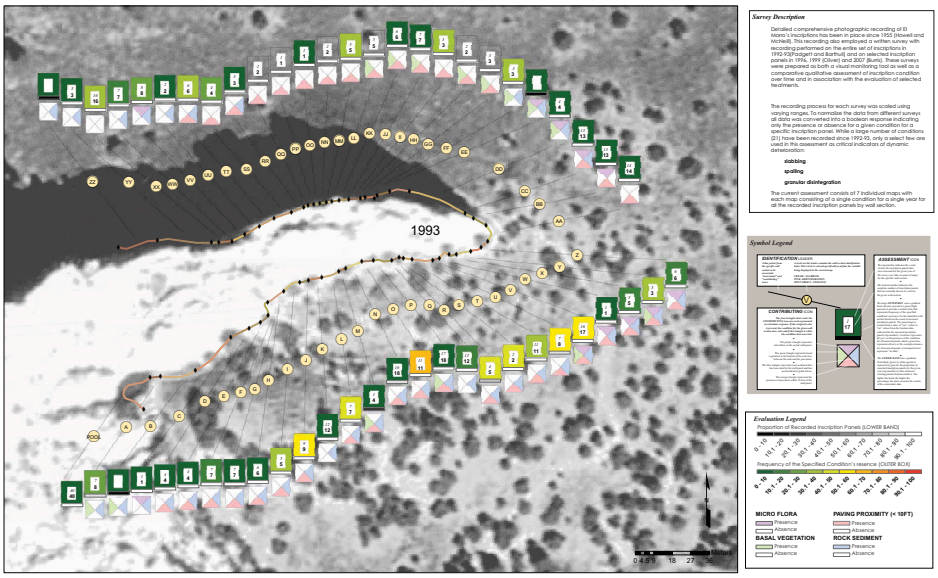
LAB

Thursday 5:00 pm 6:30 pm

GRADING and ASSIGNMENTS

Grades will be based on the assignments, class attendance and participation. It is required that you submit a digital copy of your finished assignments into the proper numbered lab folder under the submissions folder by the appointed time on the class schedule provided. Each assignment will provide a description of the required deliverable. It is also required that ALL assignments be saved to your personal folder within the course folder for your own safety. Loss of data is not an excuse for missing a submission date. It should be stressed that this class is not just about your individual organizational, artistic, or IT ability (although they are all important). It is about learning the capabilities of the many tools available to preservationists to digitally collect visualize and communicate. As such, grading may reward those that try everything and demonstrate an understanding of how all of the topics covered are connected and how they can be utilized to progress forward to an end, as seen in class discussions and final assignments.

1993 PERCENT OF SLABBING
BASED ON REVIEWED PANELS WITHIN A GIVEN WALL SECTION



Each assignment will be graded up to 5 points.

- 1 point will be given for "attempted" work that was not completed.

- 2 points will be given for the work, if it is complete but the product significantly lacks vital parts or has completely missed the point of the assignment.

- 3 points will be given for an assignment where the product is functional but where some important aspects have been overlooked.

- 4 points will be given for work that is complete, functional, and meets the basic requirements of the assignment.

- 5 points will be given for a fully functional product where all aspects of the assignment have been addressed to their fullest extent and the work exceeds expectations.

Decimal values will be given where appropriate.

All final points from each assignment will be added together and a numeric percentage will be derived based on a total of 100%. From the percentage, a letter grade will be determined based on a standard letter grade breakdown.

A+ (97–100)
A (93–96)
A- (90–92)
B+ (87–89)
B (83–86)
B- (80–82)
C+ (77–79)
C (73–76)
C- (70–72)
D+ (67–69)
D (65–66)
F (below 65).

The grade you receive is based on the cumulative value of all evenly valued assignments. There is no end of semester big final project that accounts for a disproportionate amount of your grade. Each assignment will be worth equal value. The work will be judged on a student's

ability to show an understanding of the software, and when addressing graphic display, a student's ability to be content comprehensive, as well as graphically conscious of their topic of choice.

ASSIGNMENT SUBMISSIONS

Each assignment submission must be in the course folder no later than eight (8) days after the lab class during which the assignment was presented. Since the class is scheduled for Thursdays, each assignment is due eight days (Friday of the following week) after the assignment is given. If, for any reason, you feel that you will not be able to submit your assignment on the assigned due date, you must communicate that fact in an email to the professor within seven (7) days of when it was assigned. Any late assignments (not submitted by the date and time on the class calendar and lacking a "lateness" email) may automatically be reduced by half a point and will be reduced by a full point if they are not submitted by the next Monday class period. A point will be taken off for each successive week where the assignment is not complete.

ALL assignments for the completed class must be turned in by 5 pm Friday, two weeks after the final class. There will be no exceptions.

EXPECTATIONS

Although the class is intended to provide experience and understanding of a set of digital tools used in the preservation field, it is not just about the software. Exercises and lectures are designed to introduce students to ideas and difficulties within the field by working from real data.

Since this is a course about using software then softwares will be necessary. The School of Design, and the department both have a list of softwares and software packages which you are expected to have on your computers. This includes the Office package which includes Excel, Powerpoint and Word. It also includes the Adobe Creative Suite which includes Photoshop, Illustrator, Acrobat and InDesign. In addition to these standard softwares will be some softwares that are not part of the Department's required softwares, but which are either free, or are relatively

inexpensive for the period in which we need to use them.

For those of you who use Macs. This is a class taught in a school which recognizes Windows as the primary computer system. As such, the assignments are written for PC. With that said though, all of the assignments can be done on Macs. The difference is that tools in the Mac version may be in different locations within the software interface, or some Key commands may be different. In almost every case, if an assignment mentions the CTRL key, Mac users should replace that with the Open Apple on their keyboard.

ACADEMIC INTEGRITY

The following is a link to the University of Pennsylvania Code of Academic Integrity. It is understood that all students will adhere to this university policy.

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

TEACHING ASSISTANCE

A teaching assistant is available for your benefit. The available hours will be provided at the beginning of the class. Although the teaching assistant is there for you, if you are having problems with assignments please make sure that you bring it to my attention in a timely fashion. It is impossible for me to know if you are having difficulties if you do not communicate.

MY OFFICE HOURS

I am available to help students with the class assignments, or to provide advice on individual projects and theses on an as-needed basis. Office hours are Monday afternoon from 1:00 pm to 4:00 pm. If you would like to do the meeting virtually, please send me an e-mail and we can discuss how best to address this. You are also welcome to visit me at my office at 4201 Spruce Street, but please send me an e-mail in advance so that we can determine the time.

Questions can also be asked through e-mail. I can often get you out of your

difficulties in a short e-mail response. I check my e-mail twice a day in the morning when I arrive in the office, and late in the afternoon before I leave. I may check other times depending on the demands of my day but no one should expect a message from me faster than these two time slots allow.

I do not use any texting platform and I do not address any class related questions during a weekend.

SEMESTER OVERLAP

Because this class begins mid-way through the first semester and concludes mid-way through the next, it requires a unique approach to grading. The university requires that I give everyone a grade at the end of the first semester even though the class is only 50% complete. You will all receive an "S" as a grade indicating that you have completed your work to a satisfactory level. This is not a final grade for the semester. This acts as a place holder so that the course can be completed. Once grades have been calculated from all of your work you will be awarded the same grade for both of the 1/2 semester sessions.

For anyone taking the class for .5 credits, you will receive your final grade at the end of the fall semester.

2023 HSPV Digital Media Schedule

Week 1 Oct 26	Course Introduction	Introduction to course and reference materials Example applications from recent projects
	Lab-1(graphics and imagery)	The value of Open Street Map and how to Modifying Maps in both softwares) SOFTWARES: Internet, Photoshop and Illustrator. Vector and Raster: Whats the diffference? What is good resolution? Manipulating Rasters and Vectors to suit your needs.
Week 2 Nov 3	Class-2	Case Study: Jackson Lake Lodge
	Lab-2(graphics and imagery)	Working with Metadata in Bridge How to take advantage of that metadata for easy searching and the creation of simple contact sheets in Indesign using the metadata as SOFTWARES: Bridge, Indesign Data Magagement.
Week-3 Nov 10	Class-3	Case Study: New York State Pavilion, Queens, NY
	Lab-3(graphics and imagery)	Selectively correcting images in Photoshop for light, color and shadow. SOFTWARES: Photoshop The importance of good quality images.
Week-4 Nov 17	Class-4	Case Study: Pecos National Monument
	Lab-4(graphics and imagery)	Learning to rubbersheet and align data of similar content form different sources.Rectification and Working with Your Raster Maps as Layers i while incoporating vector lines and text to enhance the final output. SOFTWARES: Photoshop, Illustrator and Acrobat Rubbersheeting as the first step in rectified photomontaging.
	THANKSGIVING	
Week-5 Nov 31	Class-5	Case Study: Spruce Tree House, Mesa Verde
	Lab-5(graphics and imagery)	Creating a Streetscape panorama SOFTWARES: Adobe Photoshop, AutoDesk AutoCAD, Adobe Acrobat, Adobe Illustrator Photomontaging.
Week-6 Dec 7	Class-6	Case Study: Trinity Cathedral , Pittsburgh
	Lab-6 (Spreadsheets and data tables)	Collecting Outside Table Data and Cleaning It. Turning spreadsheets into data tables. SOFTWARES: The Internet, Excel Processing messy outside data for the purpose of table based assessment.
	WINTER BREAK	
Week-7 Jan 23	Class-7	Case Study: El Morro National Monument
	Lab-7(Spreadsheets and data tables)	Creating Primary Keys (or Unique IDs) SOFTWARES: Excel Primary keys as the foundation for relational databases.
Week-8 Jan 30	Class-8	Case Study: Slate Belt, Northampton Co. PA
	Lab-8(Data tables and graphics)	The development of a graphic timeline using Excel SOFTWARES: Excel, Illustrator Plotting data through the use of charts and graphs.
Week-9 Feb 6	Class-9	Case Study: St Louis Cemetery No. 2, New Orleans, LA
	Lab-9 (Data tables)	Combining data tables by appending Cross table Queries in Excel. SOFTWARE: Excel Understanding the benefits and complexities of relational databases.
Week-10 Feb 13	Class-10	Case Study: Fort Union National Monument, Watrous, NM
	Lab-10 (Spatial data tables)	Getting Visualizing your tables through graphs. Getting spatial with table data to prepare for GIS SOFTWARES: Excel, Google Earth Pivot tables for the purpose of aggregative data analysis.
Week-11 Feb 20	Class-11	Case Study: Bar-B-C, Grand Teton NP
	Lab-11(Spatial data tables and graphics)	Visualization in GIS… SOFTWARES: Excel, QGIS Spatially visualizing table data.
Week-12 Feb 27	Class-12	Discussion about visualizing your information for a broad audience
	Lab-12 (Visualization)	Visualizing your data through infographics Softwares: Indesign Layout and graphic dissemination.
Week-13 Mar 5	Class-13 Lab-13	Catch-up class Catch-up Lab