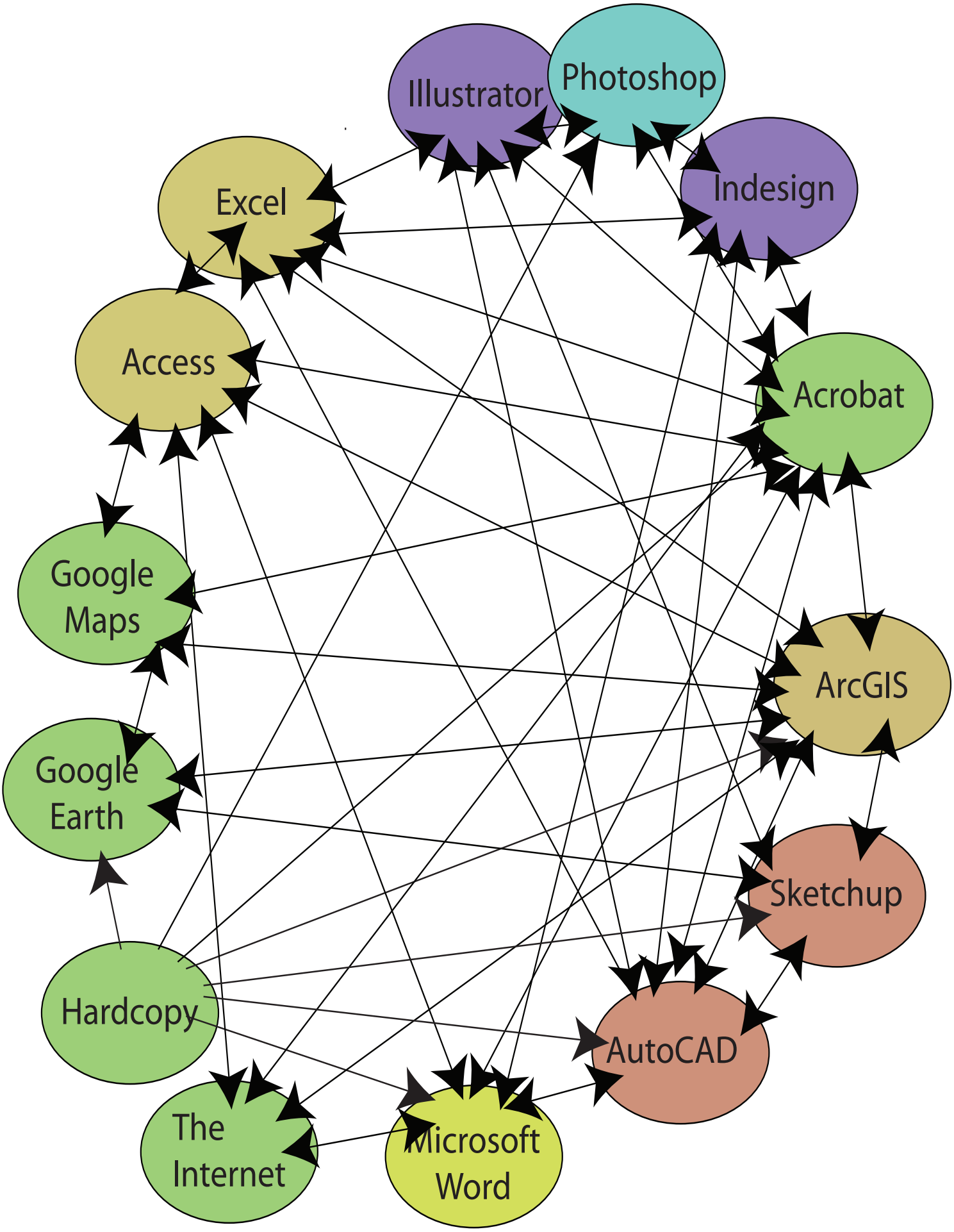
Tame your technology …
or it will become your master.

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 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 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 possess.

The use of digital tools can improve historical research efficiency, the speed and accuracy of surveys, the quantity and quality of archival information linked directly to site features, the documentation of conditions, treatments, and maintenance, the mapping and spatial location of historic sites, and 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 information (data management and analysis) and enable the production of creative communication vehicles for project dis-

cussions, funding proposals, reports, and interpretive presentations for public outreach (data distribution).

While all of this is critical to success in the current world of Heritage Management, simply knowing how to use the technology is not enough. To maximize these tools, we need to understand the underlying concepts on which software is built. In turn, we must know why we apply them and how to choose the right solution for a given problem. Software programs are more than just a set of buttons. Each one functions in specific ways for specific reasons, based on a set of steps provided in an instruction manual—or worse, YouTube tutorials. They are tools to collect, process, manage, and disseminate information.

Just as we didn't treat a note to a client the same way we treated a historic map in the pre-digital age, we must now ensure that we identify our data for what it is, determine what we want to do with it, and then decide on the appropriate software for processing it. Fortunately, most people today are savvy enough not to use Microsoft Word to write letters to clients and save photographs—although I've seen it done! Digital fluency allows us to know the right software and how to use it to its maximum potential. For example, a digitized paper map can be used in Adobe InDesign for a final report layout, in Adobe Photoshop to apply metadata, in AutoCAD to vectorize the map, and in ArcGIS to serve as a historic background alongside other spatial data. Each of these uses is valuable, but for different people in the same office, should they all be accessing the exact same digital map file on a server? Answering such questions is key to effective digital data management.

In Heritage Management, we are taught to think like archivists whose primary role is to make good choices and not hoard. But do we think this way digitally? With the expanding rate and reduced cost of storage, we must remember that just because we can store everything doesn't mean we should store everything. To contribute meaningfully and intelligently in the field, professionals must be able to set limits within the digital realm. When is too much really too much? What do you keep, and what do you discard? How many copies of a file should be kept, and which copy should be considered the most important? Just because you can take a 50-megapixel image, does that mean your client wants it or that your software can

With powerful analytical capabilities, these tools can improve our understanding of information and enable creative production...

handle it? If you can take 5,000 photographs of a site, does that mean you should keep them all? If you can provide your client with a database containing all of your collected data, but they can't understand the database design, what good is it? LIDAR and laser scanning are popular right now, but the files can be massive and difficult to convert into something useful. In the end, too much data can be a huge waste of time and money.

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

- **collection**
- **analysis (management /processing)**
- **dissemination (presentation / communication)**

These three ideas existed before the digital age and although they are critical, application can not be ignored. Software needs to be learned and used regularly to remain useful. It's not like riding a bicycle—either you use it, or you lose it! This class will discuss and POTENTIALLY utilize many ubiquitous software programs in greater depth, including:

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

People from different areas of Heritage Management have varying levels of experience with different software programs, often for different purposes. The goal of this class is to help both beginners and seasoned veterans by addressing not just the software itself, but also the concepts associated with using software in Heritage Management in the digital age. By the end of the course, you should not only have a set of useful software tools but also the ability to make informed decisions about what to use, how to use it, and when to use it.

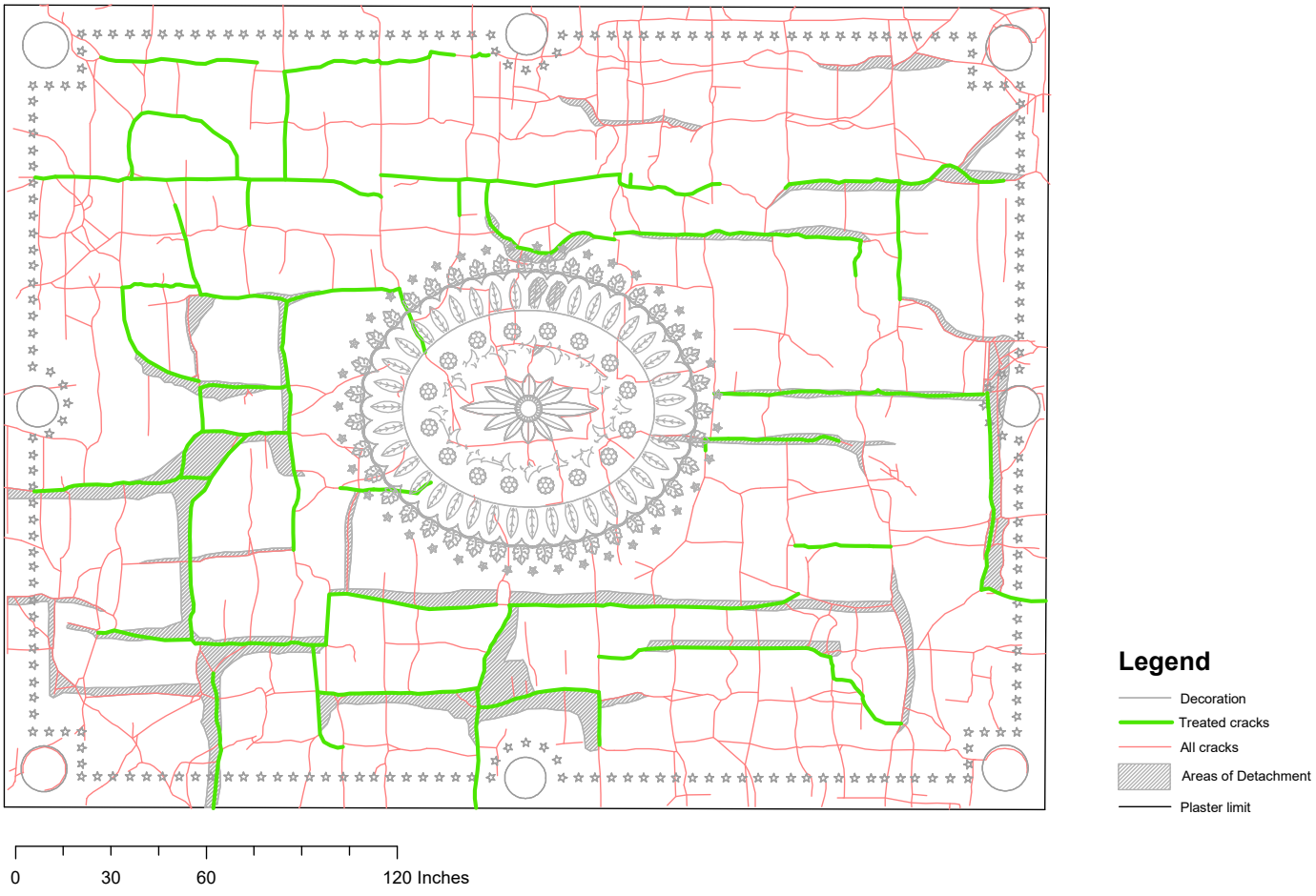
This class is not simply "Button Pushing 101," nor is it intended to make anyone fully proficient in any single software covered. Entire semesters could be devoted to mastering each of these programs. Therefore, it's your responsibility to continue the learning process. This class will discuss or mention a large number of software programs—some common and others less so. While not all of the software discussed may be available to everyone, having access to each one is not critical to understanding the broader concepts they convey.

This course is primarily focused on methodologies and concepts, designed to help you better understand how to integrate available software as tools. Most importantly, it is a skills-based class. Just as a carpenter learns both the use of tools and the process of building a house, this class aims to help you associate software tools with the projects you're working on. It's this conscious connection between tool and product that makes a professional more valuable in their field. Similarly, learning software outside the context of its real-world application can make it difficult to fully understand or apply. Like a carpenter who improves by using a hammer repeatedly, mastery comes through practice.

Approaching client requests isn't controlled by a rigid sequence of tools (just as a carpenter doesn't pick up a hammer and drive all the nails before switching to a saw). Likewise, the use of software in this class will not follow a strict sequence. We may revisit the same software at different points based on need. The goal is to introduce you to available tools while "building the house," and through your creativity, you will discover how these tools can be applied in various settings. If you've learned to use tools to build a house, it's not a great leap for a creative person to figure out how to use those same tools to build a boat.

Several software programs will be discussed and used during this class. Additional instruction sheets are provided with step-by-step guides to help with the processes. This class is not intended to make anyone fully proficient in any specific software, but rather, it aims to foster confidence with digital technology among heritage management professionals.

The exercises are designed to tackle common problems encountered in various areas of the field, producing meaningful and communicative outputs with a clear focus on the modern digital age. Although these exercises are intended to provide hands-on experience with digital tools, they also introduce students to the challenges and concepts of heritage management by using real, interrelated data and realistic expectations—whether or not computers are involved. As such, the class emphasizes not only software proficiency but also the importance of concepts, content quality, creativity, and the production of well-executed reports and products—both in terms of content and design—similar to what would be ex-



pected in any professional setting.

At its core, this course is about process. It's important to remember that finding the correct answer is not always the fastest route to competency. Mistakes will be made by everyone, and encountering pitfalls is a natural part of learning. However, correcting those mistakes enhances your comfort with the technology, making it easier to choose the right software for a given task.

By gaining a better understanding of the integrated nature of different software programs and the underlying concepts behind them, you will be able to choose a software tool not because it's the one you're most familiar with, but because you know it's the right one for the job.

PRE-REQUIREMENTS

There are NO pre-requirements! A resource list of books, helpful websites, and other training resources 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

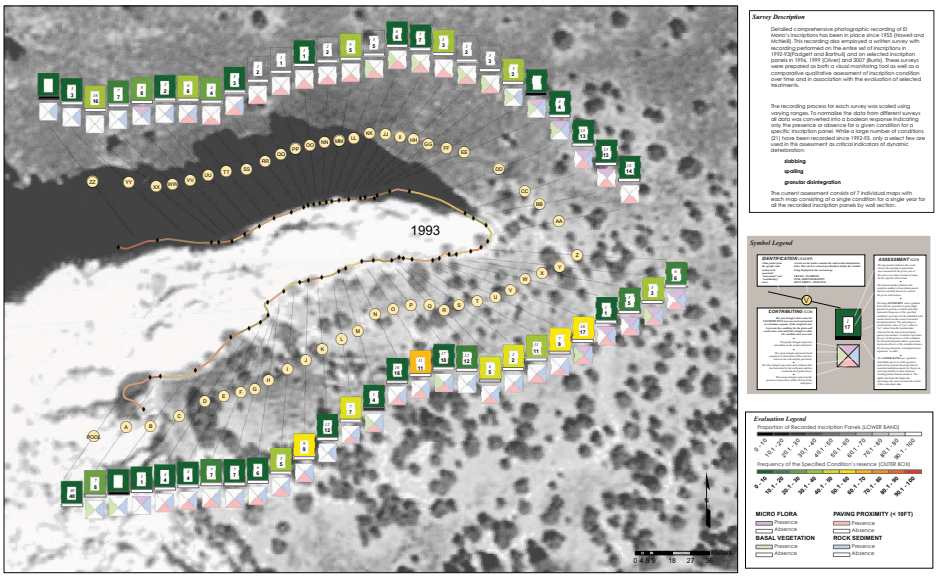
GRADING and ASSIGNMENTS

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. 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.

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



- 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 and through presentations of real world projects.

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, almost 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. For any assignment that cannot be completed on a Mac, softwares available in the Meyerson hall computer labs will allow the assignment to be completed.

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

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 at my office located at 4201 Spruce Street. 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 at other times, but please send me an e-mail in advance so that we can determine a 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. For that first semester 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 for the entire 14 weeks, 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.