School of Information, The University of Texas at Austin
INF 393C.10 Treatment techniques for flat paper
Course meeting times: Tuesday, 9:00 - 11:45, UTA 1.506B (Paper Lab)

Course Description
Basic procedures and techniques for the care and handling of materials found in library and archival collections; setting realistic goals and priorities for collection care; basic concepts of preventive conservation; understanding the nature of materials; the role of exhibits in cultural heritage institutions; practical experimentation. There are no prerequisites.

Lecturer: Karen L. Pavelka
Email: pavelka@utexas.edu
Lab: UTA 1.506B phone: 512-471-8269 (Much more likely to be here.)
Office: UTA 5.422 phone: 512-471-8286 (Rarely in office.)
Lab hours: Posted on lab door and may change over the course of the semester.

Objectives:
Techniques that can do a substantial amount of good for a collection, but can be performed with minimal equipment, space, materials and skill will be covered. Additionally, students will learn how to teach techniques to others and how to evaluate and improve technicians' performance. Students will learn to:

- perform basic conservation treatments including dry cleaning; humidification and flattening; and mending
- design and construct enclosures
- assess the condition of materials and select appropriate repair techniques
- allocate collection care resources
- follow basic laboratory protocol
- understand basic considerations for exhibits
- fabricate basic tools

In addition, students will observe and possibly assist with more complex conservation treatments.

Tools and materials
Students will be provided with a tool kit for use during the semester. The tool kit must be returned in good condition at the end of the semester. Treatments will be performed on a variety of collection and non-collection materials, most of which will be provided by the instructor, but students are welcome to bring in materials from their personal collections to augment class assignments. Treatments of those materials is subject to approval by the instructor. Students may be responsible to supply some materials, such as small books for enclosures.

Lab use
Students will have key card access to 1.506 (Anteroom) at all times UTA is open. Please use this room respectfully. Reading materials are not to be taken from the room without the explicit permission of the instructor. (That's me, Karen, and no one else.) However, please do use the room. It is a nice, quiet place to read, study or hold small meetings. NO FOOD OR BEVERAGES.

Students are welcome to use the paper lab 1.506B during lab hours and office hours. These hours will be posted on the doors to the anteroom by the end of the first week of class, but may change over the course of the semester. The lab has equipment, microscopes and tools. Students may use any of these but only with the explicit permission of and training from the instructor. (Again, that's me, Karen, and no one else.) Labs can pose physical and chemical dangers and all rules must be respected.
Lab rules

- No food or drink is allowed in the lab. Ever. This is for your own personal safety.
- Do not put your hands in your mouth when working in a lab. Ever.
- Do not touch your face, especially eyes.
- Closed toe shoes must be worn at all times in the labs.
- No high heels. Really. Even if you had to dress up that day. Carry an extra pair of shoes.
- Shorts are discouraged and prohibited when working with solutions or blades.
- Small children are not allowed in labs. Older, well-behaved, supervised children are allowed in for tours and such.
- Personal protective equipment must be worn as appropriate.
- Eye protection must be worn when working with power tools. Failure to adhere to this rule will result in an F for the course.
- Loose clothing and long hair must be tied back when working with power tools or blades. Again, F for the course if this rule is not obeyed.
- Do not use any equipment unless you have been properly trained and have been given permission. Note F mentioned earlier.
- The first aid kit is on top of the flat files to the right of the utility sink in the paper lab. It has band-aids.
- Eyewash stations are mounted on the utility sinks in the paper and book labs. They are flushed weekly.
- Emergency showers are located near the utility sinks in both labs.
- Do not open any cabinet or drawer unless you have been given permission.
- Do familiarize yourself with what is in communal cabinets.
- Do not borrow tools without permission.
- All tools must be cleaned and all materials put away before leaving the lab area.
- The lab should be cleaner when you leave it than it was when you arrived. It makes no difference that you did not make the mess, you are still responsible for keeping the labs clean.

Assignment due dates

January 28: Complete OH201-Bring print out to class
February 18: Teflon and/or micro-spatula
February 18: Enclosure for object and documentation
May 5: Treated object and documentation

Grading

<table>
<thead>
<tr>
<th>Task</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>OH201 completed</td>
<td>5</td>
</tr>
<tr>
<td>Teflon or micro-spatula</td>
<td>15</td>
</tr>
</tbody>
</table>

You are welcome to make one of each, but I will only grade one.

<table>
<thead>
<tr>
<th>Task</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Object enclosure and report</td>
<td>25</td>
</tr>
<tr>
<td>Treated object and report</td>
<td>25</td>
</tr>
<tr>
<td>Lab, tool and equipment maintenance</td>
<td>5</td>
</tr>
<tr>
<td>Class attendance and participation</td>
<td>25</td>
</tr>
</tbody>
</table>

I will use the following schedule as the basis for calculating grades: A=95-100, A-=89-<95, B+=84-<89, B=79-<84, B-=74-<79, C+=69-<74, C=64-<69, C-=60-<64, F=<60. Grades will be reduced by 2 points for every day they are late unless prior arrangements have been made.
**Course Policies**
Students with disabilities may request appropriate academic accommodations from the Division of Diversity and Community Engagement, Services for Students with Disabilities, 471-6259. [http://www.utexas.edu/diversity/ddce/ssd/](http://www.utexas.edu/diversity/ddce/ssd/)

Students are expected to adhere to the University Honor Code. [http://www.utexas.edu/about-ut/mission-core-purpose-honor-code](http://www.utexas.edu/about-ut/mission-core-purpose-honor-code)

By UT Austin policy, you must notify me of your pending absence at least fourteen days prior to the date of observance of a religious holy day. If you must miss a class, an examination, a work assignment, or a project in order to observe a religious holy day, you will be given an opportunity to complete the missed work within a reasonable time after the absence.

**Assignments**

**Enclosure for object**
Each of you has been given an object that needs a specially designed enclosure. You will design and build an enclosure for this object that allows safe storage and handling, but does not require an excessive amount of time or expense to build. The enclosure will be fabricated using the materials available to you in the lab and it should be simple enough that you could teach the construction method to a technician working with you. It must allow removal of the object for display or study; protect the object; and allow for storage and transport within the building. Finally, it must be built in the lab, you may not submit a drawing only.

The first step in the process will be to determine what the object is made of, and what materials are appropriate to protect that material. For instance, it is not generally recommended to store colored photographs in alkaline buffered paper. As part of the investigation, you will also identify all the potential research applications.

As part of the assignment, you will write step by step instructions to construct the enclosure, including a list of required tools and materials and a diagram. Include a statement about the strengths and weaknesses of this enclosure, giving examples of when it might be useful and types of objects for which it is and is not intended. Calculate the cost of building the enclosure considering time and materials.

Please submit the assignment by the end of the day on February 18. The assignment includes the following components:
- Description of object including identification of materials
- Research applications of object
- Object stored within enclosure
- Directions for removing and replacing object
- Directions to build enclosure, including cost of materials

Enclosures will be graded according to the following criteria:
- Accuracy of description
- Bibliography for description and selection of storage materials
- Level of protection provided for object
- Conformation to standard sizes
- Usability, elegance and simplicity of design
- Clarity and accuracy of instructions
- Overall neatness & aesthetics (viewed somewhat liberally)
**Tool making**

Students will choose whether to make a Teflon folder or to modify a micro-spatula. You may make one of each if you like, but there is no extra credit. Both of these processes have physical risks and you need to pay attention to those to avoid injury. Toolmaking techniques will be illustrated in class and it is recommended that students take good notes.

**Teflon folder**

Each student is given a 3/8 x 8” Teflon rod and there are several models of finished tools that can be observed. You will decide what shape you want the tool to be, keeping in mind that there are two ends to the rod. You may want to carve thumb notches.

To carve the tool:

First work with a knife as you would whittle with wood. Shape the tool as finely as possible in this step. Be sure all fragments of Teflon are contained and disposed of. Do not let them fall on the floor as they create a slipping hazard.

When you have shaped the tool, you can refine it with sand paper. This must be done under water as it is hazardous to breath in the Teflon dust.

After you have sanded the tool, it can be further modified by burnishing on burlap or another somewhat rough surface. The tool will get better and better as you use it, and can be modified again if your needs change.

**Micro-spatula**

Micro-spatulas are more useful if they are thin, but not knife-edge sharp. You will begin thinning the tool either working on the band sander, the grinding wheel, or a set of sharpening stones. The first two options are power machinery and all cautions must be followed. Techniques will be demonstrated in class and students are urged to take good notes.

**Cautions:**

- Loose hair or clothing can get caught in power machinery. This could cause severe injury or death.
- A face shield and/or goggles must be worn.
- It is easy to become too focused and scrape your knuckles. While this is not serious, it hurts.
- The tools get hot as they are ground and you can burn fingers. It hurts.
- If the metal gets too hot, it changes the temper of the steel. You can identify this by a black mark that does not wash off. If this happens, you will need to grind that part of the tool off.

Please submit the tools for evaluation by the end of class on February 18. You may leave the tools in your tool kit.

Tools will be graded according to the following criteria:

- Quality of craftsmanship
- Usefulness of design
- Neatness of work
- Followed cleanliness and safety protocols during fabrication

**Object treatment**

Each student will be assigned one object to be examined, documented and treated. We will go over the individual treatment guidelines in class. You will need to write a treatment report and keep treatment notes for the object.
The report will follow a template and have sections for Historic Significance, Description, Condition, Testing, Proposed Treatment, Treatment Procedures and Bibliography. You will need to research both the material composition and historic significance of your object, and your bibliography will reflect that research, as well as any articles you found related to the treatment. You will need to keep meticulous notes about the treatment. The notes are kept by hand and filed in the Paper Lab at the end of the treatment, and they are written up as part of the treatment report.

Please submit the treated object by the end of class on Tuesday, May 5
Object in final housing on table in paper lab
Written treatment report, including bibliography, notes and printed photodocumentation, placed on top of or next to object in housing

**Course schedule**

**January 21 Week 1**

*Lab safety; Manual dexterity test*
*Introduction to housings*

**Assign:** Object for enclosure  
**Due February 18**

**Assign:** Complete OH201, Course from Environmental Health and Safety Office  
**Due January 28**

**Readings:**


**January 28 Week 2**

*Housings and enclosures continued*
*Toolmaking techniques*

**Assign:** Teflon tool or micro-spatula  
**Due February 18**

**Readings:**

Other readings will be selected by the student and included in the bibliography for the object enclosure assignment. Please share resources as appropriate. The class is collaborative, not competitive.

**February 4 Week 3**

*Open labs-work on tools and enclosures*

**Readings:**
Readings will be selected by the student and included in the bibliography for the object assignment. Please share resources as appropriate. The class is collaborative, not competitive.
February 11  Week 4
Open labs - work on tools and enclosures

February 18  Week 5
Object enclosures due
Tools due

Assign:  Object for treatment and treatment report.  Due:  May 5

Readings:
Sample treatment report. (On Canvas)
Treatment report template. (On Canvas)

February 25  Week 6
Examination and Documentation
Photodocumentation

Readings:
Nikon camera manual. (In Paper Lab; can be signed out)

March 3  Week 7
Examination and Documentation
Fiber and pigment analysis
We will be working with strong reagents in class. Closed toe shoes, long sleeves, no shorts

Readings:
The shelf of books on the fourth shelf from the bottom, right side bookcase in the anteroom has books on microscopy. Please look through them before class.
March 10   Week 8
Visit CAH
Meet at entrance at 9:30

Readings:

March 17   Spring Break

March 24   Week 9
Open labs-Work on treatments
Demonstrate dry cleaning and humidification

Readings:
Paperonline. (2014). January 9, 2015, from http://www.paperonline.org/ Read at least the sections on History and Papermaking. The information is from a papermaking company, so take it with a grain of salt.

March 31   Week 10
Open labs
Demonstrate mending

Readings:

April 7 Week 11
Inspecting incoming collections

Readings:
April 14      Week 12
_Demonstrate cosmetic integration_

Readings:

April 21      Week 13
_Open labs_

April 28      Week 14
_Open Labs_

May 5        Week 15
_Review_
_All treatment, documentation and housing complete_