

INF 393C: Preservation Science and Practice

Fall 2024

Unique Number: 27985

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Canvas: <https://utexas.instructure.com/courses/1393904>

Course Meeting Times

Wednesdays, 9 AM – 12 PM

Course Description

Ever wondered how libraries and archives safeguard historical materials for future generations? Preservation is the answer. In this course, students learn collections care strategies that enable today's information stewards to protect our growing cultural record. Scientific foundations and practical exercises will address common preservation challenges, such as environmental control, mold, insects, pollutants, and light damage. Modern topics in health, safety, and sustainability will highlight the developing nature of the field. Students will evaluate preservation risks for books, paper, electronic media, and other collections materials.

Learning Objectives

By the end of this course, students should be able to:

- Understand the preservation impacts of temperature and relative humidity on physical collections materials
- Evaluate the impacts of macro-environments (HVAC and buildings) and micro-environments (enclosures) on preservation and environmental sustainability
- Conduct and report on environmental monitoring

- Assess the preservation impacts of light exposure and fading
- Recognize the ways pollutants enhance materials degradation
- Understand the risks and sustainable control methods for pests and mold
- Guard against health and safety hazards for preservation practitioners

Course Requirements

There are no prerequisites for this class. Students are expected to attend all classes and complete all reading assignments before each class meeting. There may be one or more off-site class meetings.

Teaching Modality

This course meets synchronously and in person.

Attendance

Students are expected to attend all class meetings. Unexcused absences count against the course participation grade. Excused absences are as follows:

- Absences are excused without penalty for religious and health reasons.
- Absences are sometimes excused without penalty for work and family reasons.

For any absence, please provide as much advance notice as possible and make arrangements to keep up with course topics and assignments. Please notify me of attendance issues in writing via Canvas or e-mail.

Communication

The course Canvas site can be found at utexas.instructure.com. Please email me through Canvas. You are responsible for ensuring that the primary email address you have recorded with the university is the one you will check for course communications because that is the email address that Canvas uses.

Required Texts

Northeast Document Conservation Center. *Preservation 101: Preservation Basics for Paper and Media Collections, Online Textbook*. Available online at:
<https://www.nedcc.org/preservation101/welcome>

This free, online text was developed by NEDCC with funding from IMLS, the Institute for Library and Museum Services. The text is used with NEDCC's "Preservation 101" class. We

will use it as a backbone for our course and supplement its introductory material with additional readings.

All other course readings are available in the Files section of our Canvas page or online.

Assignments

Please submit all assignments via Canvas unless otherwise instructed. All assignments are due by the beginning of class on the due date. If you have a legitimate reason for an assignment to be late, please discuss it with me as early as possible.

Participation (15 pts)

Assigned Week 1; completed throughout the semester.

Students are responsible for making substantive contributions to class discussions to help guide the direction of the class. When possible, use our readings and resources as the foundation for your commentary. Students should also be active and inquisitive participants in hands-on exercises. When your neighbors are working with different materials, or have different outcomes, learn from that. Attendance and tardiness are also part of the participation grade.

Topical Presentation (15 pts)

Assigned Week 1; completed throughout the semester.

Students will be responsible for leading class discussion of assigned readings or topics on one class day. Discussion should include brief synopses of readings, relevance within preservation workflows, and several questions to spur engagement among classmates. This is your chance to take ownership of and teach a topic. Your presentation will serve as a springboard for our class discussion. Student-led discussions should last about 30 minutes and cover specific readings as assigned.

Environmental Monitoring Report (8-10 pages) (20 pts)

Place monitors Week 4; Report Assigned Week 6; due Week 8.

The class will place environmental monitors in approximately five locations in a Briscoe Center collections storage area in UTA to record data for two weeks. Using our shared data, write an individual report to summarize your findings (use graphs) and assess the suitability of the observed areas for archives storage. Your analysis should include the following:

- Use the psychrometric chart to determine all environmental parameters beyond temperature and RH in these areas. Base your analysis on a mean temperature and RH value in each observed area.
- Use the Image Permanence Institute Dewpoint Calculator (online) to determine the materials risks for these areas, including the Preservation Index and risks of mechanical

damage, mold, and metal corrosion. Base your analysis on a mean temperature and RH value in each observed area.

- Consider the following analysis questions:
 - Are the areas you measured safe for collections storage? For what kinds of materials? (Cite references as necessary.)
 - What types of damage might you observe in paper-based materials stored in these areas?
 - Do you think the same air handler services all the areas you examined? (Hint: one air handler produces one dewpoint.)
 - Do you see patterns in your data? Does it track with outdoor or other conditions? What might it tell you about your building?

Exhibit Lighting Recommendations (8-10 pages) (20 pts)

Place tests Week 1; report assigned Week 9; due Week 11.

Choose three to five sample collection materials from the lab. Arrange them, half-covered, along with a blue wool card, also half-covered, under the fluorescent lights in the UTA 1.506 exhibit area. Use a light meter to measure the illumination and UV in the area. Begin the test in Week 1 and let it run through Week 9. **Check your samples at least weekly to record the time of first-observable fade.**

Now, imagine you work with a curator who wants to display materials like these in an upcoming exhibit in our testing area. Write a report for your curator describing the materials and assessing their lightfastness using the blue wool card and the total calculated light exposure. Make recommendations for acceptable light levels and exhibit duration. Refer to your blue wool test card and light readings to support your case. Use the guidelines from our class readings (Wagner, Colby, UD ASTM, etc.) to supplement your findings. Please check with Sarah if you need help identifying substrates or media in your samples.

Consider the following questions in your analysis:

- How did your materials perform in your fading test as compared with a blue wool card? (Describe the test parameters.)
- Can you place your materials on proposed light sensitivity scales, as relevant? (Consider Wagner/McCabe/Lemmen, Colby, or UD ASTM.) Does the calculated total light exposure in your fading test support this assessment?
- How long could you reasonably display your materials, and under what brightness? Suggest several display plans. (Recall that a shorter, brighter display yields the same cumulative exposure as a longer, dimmer display.)
- How frequently might you recommend displaying your materials? (See Wagner/McCabe/Lemmen and others.)

- What might be the consequences of displaying your materials too long? (Cite references for specific materials as needed.)
- What display alternatives could you propose, if needed?

Final Report: RFP for a Preservation Storage Facility (10-20 pgs, as needed) (30 pts)

Assigned Week 12; due Week 14.

A Request for Proposals (RFP) is a business document soliciting vendors to bid on contracted work. Students will write an RFP seeking a general construction contractor to build a new library and archives preservation storage facility. The RFP should include specific project description, scope, and goals. It should address environmental controls, HVAC, building envelope, lighting, pest management, and other issues. RFPs will be evaluated for clarity and thoroughness of presentation, assuming an audience of prospective vendors who do not have a background in libraries, archives, or preservation.

For this project, assume your varied collection includes books, manuscripts, photographs, and audiovisual materials. You're seeking a 20,000 square foot facility on land your institution owns in the Austin area.

Sections in the RFP must include the following (and may include others as needed):

Project Introduction: Briefly summarize your institution and project goals.

Scope of Services: Provide detailed descriptions of the features you want in your building. Cite references or draw diagrams as needed to better explain preservation requirements to prospective vendors.

Proposal Requirements: Describe what the vendor's submission should look like. Do you want to see past experience? References? How can the vendor demonstrate they are the best candidate for you?

Evaluation of Proposals: Describe how you will evaluate submitted proposals. You might devise a point system or other evaluation mechanism. Be sure your evaluation scheme accurately reflects your priorities, and that it's clear and transparent enough to protect you from any appearance of favoritism.

Evaluation and Writing Guidelines

I will use the following schedule as the basis for calculating grades. Grades will be reduced by 2 points for every day they are late unless prior arrangements have been made.

Grade	Cutoff
A	94%
A-	90%
B+	87%

B	84%
B-	80%
C+	77%
C	74%
C-	70%
D+	67%
D	64%
D-	60%
F	<60%

In all assignments, it's always a good idea to cite class readings and related sources. This makes your work more authoritative and it lets me see that you've read and thought about class materials.

Please strive for accurate, concise, and well-organized writing that showcases your understanding of the topics at hand. My primary goal is to assess your mastery of these topics, rather than your writing. However, if your writing hinders the successful communication of your understanding, I will then grade writing by necessity. For writing assistance, please see the [University Writing Center](#).

A few writing tips specific to this class:

- Title submitted files as follows: “(Last Name)_(Assignment Title.)”
- Use double spacing.
- Use [APA Guidelines](#) for in-text citations and a reference list.
- Strive for clear topic sentences and closing statements.
- Ensure that your sentences and paragraphs build sequentially upon one another.
- Use fewer words whenever possible.
- Avoid using scare quotes whenever possible.
- Use single quotes in only one instance: a quote inside a quote.
- Use ellipses only to indicate words or ideas omitted for brevity.
- Be precise with pronouns, especially the word “they.” APA Guidelines tell us:
 - “He/him/his” and “she/her/hers” are singular and gendered.
 - “They/their” is plural.
 - “They/their” may also be singular in several special cases:
 - When a singular person identifies with more than one gender. Ex: Casey is a gender-non-binary person. They are from Texas and enjoy tacos.
 - When gender is unknown. Ex: The cup of coffee is theirs. (His? Hers? We don't know.)

- When it's bulky and awkward to say "he or she," "him or her," or "his or hers."
Ex: Each child played with their (instead of "his or her") parent. Please note, this usage is the least formal, and there's often a way to write around it.

UT Notices and Announcements

Land Acknowledgement

We would like to acknowledge that we are meeting on Indigenous land. Moreover, we would like to acknowledge and pay our respects to the Carrizo & Comecrudo, Coahuiltecan, Caddo, Tonkawa, Comanche, Lipan Apache, Alabama-Coushatta, Kickapoo, Tigua Pueblo, and all the American Indian and Indigenous Peoples and communities who have been or have become a part of these lands and territories in Texas.

Names and Pronouns

Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, culture, religion, politics, sexual orientation, gender identity & expression, and nationalities. Class rosters are provided to the instructor with the student's legal name, unless they have added a "chosen name" with the registrar's office, which you can do so [here](#). I will gladly honor your request to address you by a name that is different from what appears on the official roster, and by the pronouns you use (she/he/they/ze, etc). Please advise me of any changes early in the semester so that I may make appropriate updates to my records. For instructions on how to add your pronouns to Canvas, visit [this site](#). More resources available on the Gender and Sexuality Center's website, www.utgsc.org.

Policy on Academic Integrity

Students who violate University rules on academic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and/or dismissal from the University. Since such dishonesty harms the individual, all students, and the integrity of the University, policies on academic dishonesty will be strictly enforced. For further information, please visit the Student Conduct and Academic Integrity website at: <http://deanofstudents.utexas.edu/conduct>.

Plagiarism will not be tolerated. Please see UT's Honor Code here:

<https://provost.utexas.edu/new-honor-code-updated-2023/>

Disability and Access

The university is committed to creating an accessible and inclusive learning environment consistent with university policy and federal and state law. Please let me know if you experience any barriers to learning so I can work with you to ensure you have equal opportunity to participate fully in this course. If you are a student with a disability, or think you may have a disability, and need accommodations please contact Disability & Access (D&A). Please refer to

the D&A website for more information: <http://diversity.utexas.edu/disability/>. If you are already registered with D&A, please deliver your Accommodation Letter to me as early as possible in the semester so we can discuss your approved accommodations and needs in this course.

Student Emergency Services (SES)

Student Emergency Services in the Office of the Dean of Students helps students and their families during difficult or emergency situations. Assistance includes outreach, advocacy, intervention, support, and referrals to relevant campus and community resources. If you need to be absent from class due to a family emergency, medical or mental health concern, or academic difficulty due to crisis or an emergency situation, you can work with Student Emergency Services. SES will document your situation and notify your professors. Additional information is available at <https://deanofstudents.utexas.edu/emergency/> or by calling 512-471-5017.

Class Recordings

Class recordings are reserved only for students in this class for educational purposes and are protected under FERPA. The recordings should not be shared outside the class in any form. Violation of this restriction by a student could lead to Student Misconduct proceedings.

Online Class Components

All students must use a UT Zoom account in order to participate in online class sessions, office hours, and any UT affiliated events.

Sharing of Course Materials is Prohibited

No materials used in this class, including, but not limited to, lecture hand-outs, videos, assessments (quizzes, exams, papers, projects, homework assignments), in-class materials, review sheets, and additional problem sets, may be shared online or with anyone outside of the class without explicit, written permission of the instructor. Unauthorized sharing of materials promotes cheating. It is a violation of the University's Student Honor Code and an act of academic dishonesty. The University is well aware of the sites used for sharing materials, and any materials found on such sites that are associated with a specific student, or any suspected unauthorized sharing of materials, will be reported to Student Conduct and Academic Integrity in the Office of the Dean of Students. These reports can result in sanctions, including failure of the course.

Religious Holy Days

By UT Austin policy, you must notify me of your pending absence as far in advance as possible 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.

Counseling and Mental Health Center

I urge students who are struggling for any reason and who believe that it might impact their performance in the course to reach out to me if they feel comfortable. This will allow me to provide any resources or accommodations that I can. If immediate mental health assistance is needed, call the Counseling and Mental Health Center (CMHC) at 512-471-3515, or you may also contact Bryce Moffett, LCSW (iSchool CARE counselor) at 512-232-2983. Outside CMHC business hours (8a.m.-5p.m., Monday-Friday), contact the CMHC 24/7 Crisis Line at 512-471-2255.

To expand access to counseling services, CMHC has partnered with TimelyCare, a virtual mental health and well-being platform that is free for currently enrolled students. TimelyCare offers 24/7 on-demand emotional support, scheduled counseling, health coaching and more, available in 240 languages.”

Classroom Safety and COVID

- For any illness, students should stay home if they are sick or contagious, not only to stop the spread, but also to promote their personal wellness.
- The university will provide [COVID testing](#) by appointment through University Health Services.
- UHS maintains up-to-date resources on COVID, which can be found here:
 - [COVID-19 Information and Resources](#)
 - [COVID-19 Exposure Action Chart](#)
 - [Guidance for Ending Self-Isolation](#)
- You may choose whether to wear a mask in class. There are many valid rationales about masking at this point in the pandemic. Among them, it's wise to consider [the Travis County Community Risk Level](#).
- For guidance on COVID-related issues, contact [BCCAL](#) at 512-232-5050.

Course Schedule <https://registrar.utexas.edu/calendars/24-25>

Week 1: 8/28 (Please note: each week's readings must be completed before class for discussion during class.)

Introduction to Preservation and Paper-Based Materials

- Introduce class and syllabus
- Become acquainted with lab access and safety
- Select students to lead discussion on each week's readings
- Discuss readings and view relevant archives materials o
- Start fade test, to conclude in Week 9

Readings

Northeast Document Conservation Center. *Preservation 101: Preservation Basics for Paper and Media Collections, Online Textbook*. "Session 1: Introduction to Preservation" and "Session 4: Caring for Paper Collections." Accessed May 2020 at <https://www.nedcc.org/preservation101/session-1> Within Session 4, focus especially on "Papermaking;" "Inherent Vice: Materials;" "Inherent Vice: Structures;" and "External Factors."

Canadian Conservation Institute. *Time-Lapse Video of Deterioration: Parchment and Iron Key, Incorrect Relative Humidity*. Accessed January 2023 at <https://www.youtube.com/watch?v=KXaGY940Slk>

Week 2: 9/4

Introduction to Paper Chemistry; Temperature and Relative Humidity

- Lecture & discussion: paper chemistry and analytical techniques (Daniels, *AIC Wiki*)
- Discuss environmental storage guidelines (NEDCC; Wilson) - student
- In-class exercise: papermaking

Readings

Daniels, Vincent. "Paper." In May, Eric, and Mark Jones, eds. *Conservation Science Heritage Materials*. Cambridge, U.K: RSC Pub., 2006.

American Institute for Conservation. *AIC Wiki: Instrumental Analysis*. Accessed December 2020 at: http://www.conservation-wiki.com/wiki/Category:Instrumental_Analysis Skim this page for now, and keep it as a reference for the analytical techniques you'll encounter in readings throughout the semester.

Northeast Document Conservation Center. *Preservation 101: Preservation Basics for Paper and Media Collections, Online Textbook*. "Session 2: The Building and Environment." Accessed May 2020 at <https://www.nedcc.org/preservation101/session-2>

This chapter introduces many interrelated topics we will explore in further detail in the coming weeks. This week, focus especially on "The Storage Environment."

Wilson, W. NISO TR-01 1995: *Environmental Guidelines for the Storage of Paper Records*. 1995: NISO Press, Bethesda, MD.

Week 3: 9/11

HVAC, Buildings, and Enclosures: Creating Controlled Environments

- Lecture and discussion: HVAC mechanics and standards (Padfield; Conrad)
- Discuss readings on controlling environment in building design and enclosures (NEDCC, Ogden, NARA) - student

-In-class exercise: The class will make a simple air-conditioner. Then we will brainstorm and test design modifications to produce lower RH and/or temperature. This exercise will demonstrate some of the fundamental properties that underlie climate control for preservation.

Readings

Northeast Document Conservation Center. *Preservation 101: Preservation Basics for Paper and Media Collections, Online Textbook*. “Session 2: The Building and Environment.” Accessed May 2020 at <https://www.nedcc.org/preservation101/session-2> Focus especially on “General Building Issues” and “Controlling the Environment.”

Ogden, Barclay. *Collection Preservation in Library Building Design*. 2003: Libris Design Project and Institute of Museum and Library Services.

Conrad, Ernest. “SAA Integrates with ASHRAE.” *ASHRAE Transactions* 116 (2010): 203–206. Web.

Padfield, T. (2000). *How air conditioning works*. Retrieved April, 2020, from <https://www.conservationphysics.org/aircon/aircon.pdf>

National Archives and Records Administration. *Archives II: National Archives at College Park*. NARA Technical Information Paper 13, 1997.

Week 4: 9/18

Sustainable Buildings; the Psychrometric Chart

-Discuss environmental sustainability in preservation (Ryhl-Svendsen et. al., Image Permanence Institute, Hong et. al.) - student

-Lecture & discussion: Using the psychrometric chart

-In-class exercise: student pairs use the psychrometric chart to solve word-problem-style questions.

-Launch environmental monitors for Environmental Monitoring Report

Readings (Sustainable Buildings)

Ryhl-Svendsen, Marten, Lars Aasbjerg Jensen, Poul Klenz Larsen, and Tim Padfield. *Does a Standard Temperature Need to Be Constant?* 2010: Going Green Conference at the British Museum. Accessed May 2020 at

<http://www.conservationphysics.org/standards/standardtemperature.php> See Canvas.

Image Permanence Institute. *Implementing Sustainable Energy-Saving Strategies in Collections Environments*. IPI: 2017. Energy-Saving Strategies, pp 96-145.

Hong, Sung H et al. “Climate Change Mitigation Strategies for Mechanically Controlled Repositories: The Case of The National Archives, Kew.” *Atmospheric Environment* 49 (2012): 163–170.

Readings (The Psychrometric Chart)

Overbey, Daniel. “The Psychrometric Chart Explained.” *Building Enclosure* (2018).

Traub, Darren A. "The Psychrometric Chart: How to Use it. (Drying Files)." *Process Heating* 10.8 (2003).

Gatley, Donald. "Psychrometric Chart Celebrates 100th Anniversary." *ASHRAE Journal* 46.11 (2004): 16–20.

Week 5: 9/25

HVAC and Psychrometrics in the Real World

Guest Speaker: Joe Reyes, Managing Principal, Waterloo MEP Engineering

-Joe Reyes will share his experiences designing HVAC at cultural institutions; discuss how preservation staff and HVAC engineers can communicate effectively; and much more

Week 6: 10/2

Environmental Monitoring

- Discuss readings (NEDCC, Ntanos/Wei, Arenstein/Alderson, Iowa, Nishimura) – student
- Demonstrate and discuss environmental monitors: hygrometer, sling psychrometer, aspirating psychrometer, dataloggers
- Explore Dewpoint Calculator
- Gather environmental monitors; make a plan to share data with class
- Assign Environmental Monitoring Report, due Week 8

Readings

Northeast Document Conservation Center. *Preservation 101: Preservation Basics for Paper and Media Collections, Online Textbook*. "Session 2: The Building and Environment." Accessed May 2020 at <https://www.nedcc.org/preservation101/session-2> This week, focus especially on "Monitoring the Environment."

Ntanos, Konstantinos and W. Wei. "Environmental Monitoring." In *Preventive Conservation: Collections Storage*, Lisa Elkin & Christopher Norris, eds. 2019: Society for the Preservation of Natural History Collections and the American Institute for Conservation. Focus especially on monitoring of temperature and relative humidity.

Nishimura, D. *Understanding Preservation Metrics*. Image Permanence Institute: 2011.

Arenstein, R. and S. Alderson. *Comparing Temperature and Relative Humidity Dataloggers for Museum Monitoring*. September 2011: National Parks Service Conserve-O-Gram 3.3

Iowa Department of Transportation. *Determining Relative Humidity with a Sling Psychrometer*. See Canvas.

Week 7: 10/9

Housings and Enclosures

- Discuss readings – student
- View example housings and materials
- Student practice in selecting preservation housing for collections materials

Readings

- Lindsay, Helen. "Protective Packaging: An Introduction to the Materials Used to Produce Archival Quality Boxes, Folders, Sleeves and Envelopes." *Journal of the Society of 1393904Archivists* 21.1 (2000): 87–104. Web.
- Seo, Hilary T. and Zanish-Belcher, Tanya, "Square Pegs, Round Holes: Thinking Creatively about Housing and Storage" (2006). *Special Collections Publications and Papers*. 2. https://lib.dr.iastate.edu/speccoll_pubs/2
- Indiana Historical Society. Storage Guide to Archival Collections. 2018.
- Schönbohm, Dirk et al. "Protective Enclosures for Art on Paper, Archives and Library Materials." *Restaurator* 31.3-4 (2010): 286–303.
- Lee, Joyce and Kelly Krish. "Microclimates: A Greener Future for Collections Care." *American Alliance of Museums Blog* 7/21/21. Accessed Feb. 2022 at: <https://www.aam-us.org/2021/07/21/microclimates-a-greener-future-for-collection-care/>

Week 8: 10/16

Assignment Due: Environmental Monitoring Report

Pollutants and Acidity

- Discuss pollutant and dust readings (Wilson; Grzywacz; Lloyd) - student
- Lecture and discussion: acid degradation (Dupont & Shahani)
- In-class exercise: investigate the acidity of varied collection materials and collection storage materials.

Readings

- Wilson, W. NISO TR-01 1995: *Environmental Guidelines for the Storage of Paper Records*. 1995: NISO Press, Bethesda, MD. Revisit this source from Week 2 and focus on Section 2.3, Gaseous Contaminants; Section 2.4, Particulates; and Section 5, Air Contaminants.
- Grzywacz, C. M. (2006). *Tools for conservation. Monitoring for gaseous pollutants in museum environments*. Los Angeles: Getty Conservation Institute. Focus on Chapter 1, Gaseous Pollutants in Museum Environments: Overview; Chapter 2, The Effects of Gaseous Pollutants on Objects; and Appendix 1, Major Gaseous Pollutants of Concern to Museums, Their Sources, and At-Risk Materials
- Lloyd, Helen, Peter Brimblecombe, and Katy Lithgow. "Economics of Dust." *Studies in Conservation* 52.2 (2007): 135–146.

Dupont, A.-L. & J. Tetreault (2000) “Cellulose Degradation in an Acetic Acid Environment,” *Studies in Conservation*, 45:3, 201-210, DOI: [10.1179/sic.2000.45.3.201](https://doi.org/10.1179/sic.2000.45.3.201)

Shahani, Chandru & Gabrielle Harrison (2002) Spontaneous Formation of Acids in the Natural Aging of Paper, *Studies in Conservation*, 47:sup3, 189-192, DOI: [10.1179/sic.2002.47.s3.039](https://doi.org/10.1179/sic.2002.47.s3.039)

Canadian Conservation Institute. *Time-Lapse Video of Deterioration: Two Iron Keys, Incorrect Relative Humidity & Pollutants*. Viewed January 2023 at <https://www.youtube.com/watch?v=c2-wLGmP8sE>.

Week 9: 10/23

Light, Color, and Fading

- Lecture and discussion: Fundamentals of Light, Color, and Fading
- Discuss assessment and prevention (Conn, Wagner, Colby, UDMITRA) – student
- View fading tests and light meters
- Practice cumulative light exposure calculations
- Assign Exhibit Lighting Recommendations, due Week 11.

Readings

Saunders, David. *Museum Lighting: A Guide for Conservators and Curators*. Los Angeles: The Getty Conservation Institute, 2020. Chapters 1 & 2. <https://muse-jhu-edu.ezproxy.lib.utexas.edu/book/78777>

Conn, Donia. *Protection from Light Damage*. 2012: NEDCC Preservation Leaflet 2.4.

Wagner, Sarah, Connie McCabe, and Barbara Lemmen. (2007). *Guidelines for Exhibition Light Levels for Photographic Materials*. Retrieved April 2020 from <http://download.aaslh.org/AASLH-Website-Resources/ccaha-guidelines-for-exhibition-light-levels.original.pdf> (See Canvas.)

Colby, Karen. “A Suggested Exhibition Policy for Works of Art on Paper.” *Journal of the International Institute for Conservation - Canadian Guild* 17. 1992.

University of Delaware Materials Information and Technical Resources for Artists. “ASTM and Lightfastness of Media.” Accessed December 2020. See Canvas.

Week 10: 10/30

Eek: Mold!

Guest Speakers: Tonia Wood (Reference Archivist), Peggy Price (Education & Outreach Officer) from the Texas State Library and Archives Commission: 10:45 AM via Zoom.

- Discuss readings – student
- Mold reading and brainstorming exercise
- TSLAC speakers will share their preservation and access strategies for mold-damaged materials

Readings

- Sterflinger, K. "Fungi: their role in deterioration of cultural heritage." *Fungal Biological Reviews* 24 (2010): 47–55. doi:10.1016/j.fbr.2010.03.003.
- Brokerhof, A. W., Zanen, W. B., Teuling, A. J. M. *Fluffy Stuff: Integrated Control of Mould in Archives*. Amsterdam: Netherlands Institute for Cultural Heritage (ICN) and IADA, 2007a.
- National Park Service. *Conserve O Gram 3/4: Mold and Mildew: Prevention of Microorganism Growth in Museum Collections*. 2007.
- U.S. Environmental Protection Agency. *Introduction to Mold and Mold Remediation for Environmental and Public Health Professionals*. Chapters 1, 2, 3, and 9. Accessed May 2020 at <https://www.epa.gov/mold/mold-course-chapter-1>; also available on Canvas.

Week 11: 11/6

Assignment Due: Exhibit Lighting Recommendations

EEK: Pests!

Guest Speaker: Genevieve Pierce Kyle, Harry Ransom Center. For the second part of class, we'll walk to HRC.

-Discuss readings – student

-Genevieve Pierce Kyle will discuss her experiences with IPM and preservation management

Readings

Integrated Pest Management Working Group. *MuseumPests.net*. Accessed August 2022. Focus on two sections of this website for general familiarity:

- Pest Fact Sheets: <https://museumpests.net/dynamic-pest-fact-sheets/>
- Identification Image Library: <https://museumpests.net/newimagegallery/>

Insects Limited. *The Dirty Dozen of Museum Pests*. n.d.

Brokerhof, A. W., Zanen, W. B., Watering, K., Porck, H. *Buggy Biz: Integrated Pest Management in Collections*. Amsterdam: Netherlands Institute for Cultural Heritage (ICN) and IADA, 2007b.

Parker, Thomas. *Preservation Leaflet 3.10: Integrated Preventive Pest Management*. 2015: Northeast Document Conservation Center.

Ryder, Suzanne, and Armando Mendez. "Using Risk Zones in Museums as Part of an IPM Programme: Does It Work?" *Studies in Conservation* 64.4 (2019): 203–207.

Week 12: 11/13

Storing Plastics and Audio Materials

-Lecture and discussion: Plastics in Archives Media

-Discuss audio materials (NEDCC, Hess) – student

- Plastics ID exercise
- Assign Final Report (RFP), due Week 14

Readings

- Shashoua, Yvonne. *Conservation of Plastics: Materials Science, Degradation and Preservation*. 1st ed. Amsterdam, Netherlands: Elsevier, 2008. Print. Chapter 7: Conservation of Plastics. (See Canvas.)
- Stein, Chantal and Jessica Pace. *Collection Care Solutions for Plastics in Library and Archival Collections – An Update*. Poster presented at the Annual Meeting of the American Institute for Conservation, May 2021. See Canvas.
- Northeast Document Conservation Center. *Preservation 101: Preservation Basics for Paper and Media Collections, Online Textbook*. “Session 6: Media Collections.” Accessed April 2023 at <https://www.nedcc.org/preservation101/session-6>
- Hess, Richard. “ARSC Conference Paper - Tape Degradation Factors and Challenges in Predicting Tape Life.” *ARSC Journal* 39.2 (2008): 240–274. Web.

Week 13: 11/20

Storing Photographs and Film - and the Whole Collection!

- Discuss readings – student
- In-class exercise: student teams assume curatorial roles over varied collections materials in a fictional institution. Through a group decision-making exercise, the teams formulate facilities and storage priorities for their institution’s director.

Readings

- Northeast Document Conservation Center. *Preservation 101: Preservation Basics for Paper and Media Collections, Online Textbook*. “Session 5: Care and Handling of Photographs.” Accessed May 2023 at <https://www.nedcc.org/preservation101/session-5>
- Bereijo, Antonio. “The Conservation and Preservation of Film and Magnetic Materials (1): Film Materials.” *Library Review* 53.5/6 (2004): 323–331. Web.

Fall Break, 11/25 – 11/29

Week 14: 12/4

Assignment Due: Request for Proposals for a Preservation Storage Facility

Health & Safety

- Lecture and discussion: understanding chemical labels and guidelines; respirators & PPE
- Demonstrate lab health and safety features; proper use of PPE
- Discuss readings (Pettigrew; Bolstad-Johnson; Martinez-Kilgore; Tedone) – student

-In-class exercise: Adopt-A-Chemical - use labels and guidelines to assess risks

Readings

Occupational Safety and Health Administration. *Hazard Communication Standard: Labels and Pictograms*. DSG BR-3636 2/2013.

Occupational Safety and Health Administration. *Hazard Communication Standard: Safety Data Sheets*. DSG BR-3514 2/2012.

National Fire Protection Association. *Frequently Asked Questions on NFPA 704*. Accessed December 2021 at https://www.nfpa.org/assets/files/aboutthecodes/704/704_faqs.pdf. See Canvas.

Centers for Disease Control and Prevention. *NIOSH Pocket Guide to Chemical Hazards*. Accessed January 2021 at: <https://www.cdc.gov/niosh/npg/default.html>

Colton, Craig. *A Conservator's Guide to Respiratory Protection*. 2016: American Institute for the Conservation of Historic and Artistic Works, Washington, D.C.

Centers for Disease Control and Prevention. *PPE Sequence*. CS250672-E.

Pettigrew, H. et al. "Mold and Human Health: Separating the Wheat from the Chaff." *Clinical Reviews in Allergy & Immunology* 38.2-3 (2010): 148–155.

Bolstad-Johnson, Dawn. "The Hidden Hazards of Fire Soot." *AIC News* 35:5. September 2010: American Institute for Conservation of Historic and Artistic Works, Washington, D.C. pp. 1, 3-5.

Martinez-Kilgore, JoAnne. "Rodents and Risks to Cultural Heritage Custodians." *AIC News* 46(5). September 2021: American Institute for Conservation of Historic and Artistic Works, Washington, D.C. pp. 1, 5-8.

Tedone, Melissa. "Poison Book Project." Accessed April 2020 at http://wiki.winterthur.org/wiki/Poison_Book_Project