

**SCHOOL OF INFORMATION  
THE UNIVERSITY OF TEXAS AT AUSTIN**

**RISK ASSESSMENT AND COLLECTIONS MANAGEMENT**

INF 392F Spring 2016 Unique # 27605  
Instructor: Karen L. Pavelka  
Class location: UTA 1.506B  
Date and time: Thursday 9:00 - 11:45

**Instructor Information**

Email: pavelka@utexas.edu  
Office: UTA 5.422 phone: 512-471-8286  
Lab: UTA 1.506B phone: 512-471-8269 (Most likely to be here.)  
Office hours: Held in lab; will be announced and posted on lab doors.

**Course description:** Assessing risks in cultural heritage collections with an emphasis on library and archival collections; developing strategies to manage risks; learning practical techniques to reduce risk.

**Learning objectives**

Students will learn to:

- Assess risks within collections
- Compare the relative probability and magnitude of various risks
- Select and apply mitigation strategies
- Evaluate the effectiveness of mitigation strategies
- Identify the difference between symbolic and useful plans

**Academic Integrity**

The University of Texas policies on academic integrity can be found at

[http://deanofstudents.utexas.edu/sjs/acint\\_student.php](http://deanofstudents.utexas.edu/sjs/acint_student.php)

If you have not read the section on plagiarism recently, it is worth a review. Plagiarism and academic dishonesty will not be tolerated.

**Students with disabilities**

Students with disabilities may request appropriate academic accommodations from the Division of Diversity and Community Engagement, Services for Students with Disabilities, 512-471-6259.

**Assignment guidelines**

- Assignments are due at midnight on the due date. Unless otherwise instructed, please submit assignments on Canvas. All assignments must be submitted as a Word doc and the document should be titled as follows:  
studentlastname\_assignmentname
- Unless prior arrangements have been approved by the instructor, late assignments will be penalized by lowering the earned grade one level for each day it is late.
- If the assignment directions are not clear, or if you are having a problem with an assignment, please let me know as early as possible.

All writing exercises:

- Should have a bibliography.
- Should be well written.
- Should be reviewed by a peer before being turned in.

### **Assignments**

T&RH Monitoring exercise

Begin January 21; due February 11

Repeat dates to be decided

(Group exercise; summaries will be written individually.)

- Collect all T & RH monitoring devices.
- Calibrate instruments or record error.
- Place all instruments in in one location for one week.
- Calibrate instruments or record error.
- Place devices in secured spaces chosen by the class, with the goal of getting as much fluctuation as possible while still mimicking realistic collection spaces. For instance, placing a device on a shelf a foot away from a window is reasonable, placing it against the glass not.
- Calibrate instruments or record error.
- Compare readings initially, after 24 hours, at the end of the week.
- Write a summary of the results.
- This exercise will be repeated at the end of the semester when weather conditions have changed.

Threats exercise

Due February 26

In the 19th century William Blades wrote about the enemies of books in which he included fire, water, gas and heat, dust and neglect, ignorance and bigotry, the bookworm, bookbinders, book collectors, servants, and children. Currently Waller's description of the 10 agents of deterioration is probably the most popular system to describe threats.

- Compare Blades' and Waller's systems, or you may substitute another, more current system for Blades. You must use Waller.
- Discuss the strengths and weaknesses of each system.

Storage and housing exercise

Due February March 5

Write a cost comparison between types of high end and low end storage systems listed below. Consider the effect on deterioration and handling. Suggest any solutions to improve the poor storage other than purchasing all new materials.

- Powder coated steel flat files vs. maps rolled and stored on wooden shelves.
- Archival quality document boxes and good quality folders, stored at no more than 20 per folder vs. Bankers boxes and cheap folders holding 100 documents per folder.

Microclimate exercise

Implementation due March 12

Assessment due April 16

- Identify and describe an existing microclimate. Produce a written description and a photographic image.

- Write a brief assessment of the effect of the microclimate. Comparing an object stored in that environment with another, similar object that has been stored in a different environment would be useful if possible.

#### IPM exercise

Due March 26

(Group exercise; summaries will be written individually.)

- Research pests likely to be found in Austin and the damage they do to collections.
- Develop a hierarchy of most to least threatening insects according to types of materials.
- Split class into: Books and paper; textiles; paintings and objects.
- Each group will track their most damaging pest.
- Assuming the fictitious collection is stored on the first floor of UTA, write a plan for IPM according to the information you have found.
- The plan should include numbers of traps, schedules, procedures and staff hours required.

#### Security exercise

Due April 9

- Identify the most obvious security flaws in an institution related to theft or vandalism. (The specific institution will be discussed in class.)
- Identify the possible methods for theft or vandalism. Be realistic, but creative.
- Identify the methods that could be employed to reduce threats.
- Write a persuasive memo to have the improvements considered or adopted. If you are not familiar with writing memos, please find guidelines and follow them.

#### Lighting exercise

Due April 16

- Find a reading about the necessities and effects of lighting collection materials that is not currently on the reading list for this class.
- Cite the reading according to APA and give a summary of why you think it should be included.

#### Climate debate essay

Due April 16

- Review the literature and write a short paper in which you take a stand about how stringent controls should be. Essays will be judged on specificity and rational. Avoid "it depends" statements.

#### Events essay

Due April 23

- Receptions are often held in collection display areas such as galleries even though the risks from such events are high.
- Attend an event held in a collection space.
- Identify all the risks you observe
- Describe steps staff had taken to avoid damage.
- Describe any realistic steps that might have been taken.

### **Class attendance and participation**

- Students are expected to attend all classes. If you need to miss a class, if possible let me know before class begins.
- All readings should be done before the class meets.
- Class participation is 20% of your grade and is measured by contributions to discussions, enthusiastic participation in class exercises, and anything the student can bring to make the class a richer experience for everyone.
- If you are having trouble participating in class, please come and talk to me. We may be able to find strategies to help you.

### Grading

Grade points will be distributed as follows:

• T&RH exercise, phase 1 and 2	15%
• Threats exercise	10%
• Microclimate exercise	10%
• IPM exercise	10%
• Lighting article	5%
• Security exercise	5%
• Storage and housing exercise	5%
• Climate debate essay	10%
• Events essay	5%
• Quizzes	5%
• Attendance and participation	20%

### Suggested texts

Please do not purchase the texts before the class meets. We will be taking a somewhat different approach to the readings and not everyone will be reading the same text. Students will be asked to contribute to the reading list.

- AIC. (2015). *STASH. Storage techniques for Art, Science and History*. Retrieved January 18, 2016 from <http://stashc.com/>
- Appelbaum, B. (1991). *Guide to environmental protection of collections*. Madison, Conn.: Sound View Press.
- Ashley-Smith, J. (1999). *Risk assessment for object conservation*. Oxford: Butterworth-Heinemann.
- Ashley-Smith, J., Burmester, A., & Eibl, M. (Eds.). (2013). *Climate for collections: Standards and uncertainties*. London: Archetype Publications, in association with Doerner Institut, Munich.
- Boersma, F., Brokerhof, A., van den Berg, S., & Tegelaers, J. (2008). *Unravelling textiles: A handbook for the preservation of textile collections*. London: Archetype.
- Cloonan, M. V. (2015). *Preserving our heritage: Perspectives from antiquity to the digital age*. Chicago: Neal-Schuman, an imprint of American Library Association.
- Druzik, J. R., & Michalski, S. (2012). *Guidelines for selecting solid state lighting for museums*. CCI/GCI. Retrieved January 18, 2016 from <http://stashc.com/http://www.connectingtocollections.org/wp-content/uploads/2011/08/SSL-Guidelines-Ver.-10.0.pdf>
- Harvey, R., & Mahard, M. R. (2014). *The preservation management handbook: Archives, and museums: A 21st-century guide for libraries, archives, and museums*. Lanham, MD: Rowman & Littlefield.

- Hatchfield, P. (2002). *Control of pollutants in the museum environment: Practical strategies for problem solving in design, exhibition and storage*. London: Archetype.
- Hawks, C. A., & Butts, S. H. (2011). *Health & safety for museum professionals*. New York: Society for the Preservation of Natural History Collections.
- IAMFA. (2013). *A practical guide for sustainable climate control and lighting in museums and galleries*. Retrieved January 18, 2016 from [http://stashc.com/http://www.magsq.com.au/\\_dbase\\_upl/APracticalGuideforSustainableClimateControlandLightinginMuseumsandGalleries.pdf](http://stashc.com/http://www.magsq.com.au/_dbase_upl/APracticalGuideforSustainableClimateControlandLightinginMuseumsandGalleries.pdf)
- Lavedrine, B., Gandolfo, J.-P., & Monod, S. (2003). *A guide to the preventive conservation of photograph collections*. Los Angeles: Getty Conservation Institute.
- Maekawa, S., & Elert, K. (2003). *The use of oxygen-free environments in the control of museum insect pests*. Los Angeles: Getty Conservation Institute.
- Miller, M. S. (2002). *Protecting museum exhibits from their environments (and vice versa)*. Seaford, DE: NoUVIR.
- Padfield, T., & Borchersen, K. (Eds.). (2007). *Museum microclimates: Contributions to the Copenhagen conference 19-23 November 2007*. Copenhagen: National Museum of Denmark.
- Person-Harm, A., & Cooper, J. (2014). *The care and keeping of cultural facilities: A best practice guidebook for museum facility management*. Lanham: Rowman & Littlefield.
- Pinniger, D., & Meyer, A. (2015). *Integrated pest management in cultural heritage*. London: Archetype.
- Pinniger, D. (1990). *Pest management in museums, archives and historic houses*. London: Archetype.
- Richmond, A., & Bracker, A. (Eds.). (2009). *Principles of conservation: Principles, dilemmas and uncomfortable truths*. Oxford: Butterworth-Heinemann.
- Teutonico, J. M., & Matero, F. G. (Eds.). (2003). *Managing change: Sustainable approaches to the conservation of the built environment : 4th Annual US/ICOMOS International Symposium organized by US/ICOMOS, Program in Historic Preservation of the University of Pennsylvania, and the Getty Conservation Institute 6-8 April 2001, Philadelphia, Pennsylvania*. Los Angeles: Getty Conservation Institute.
- Thomson, G. (1994 or later). *The museum environment*. London: Butterworth.
- United States. Dept. of Energy. (2011, September). *Demonstration of LED retrofit lamps at the Jordan Schnitzer Museum of Art* (Report No. PNNL-20019) (N. Miller, Author). Richland, WA: Pacific Northwest National Laboratory. Retrieved January 18, 2016 from [http://apps1.eere.energy.gov/buildings/publications/pdfs/ssl/2011\\_gateway\\_schnitzer.pdf](http://apps1.eere.energy.gov/buildings/publications/pdfs/ssl/2011_gateway_schnitzer.pdf)
- Williams, D., & Jaggard, L. (2005). *Saving stuff: How to care for and preserve your collectibles, heirlooms, and other prize possessions*. New York: Fireside.
- Williams, E. (2013). *The public face of conservation*. London: Archetype.
- Winsor, P., Pinniger, D., Bacon, L., Child, B., Harris, K., Lauder, D., . . . Xavier-Rowe, A. (Eds.). (2012). *Integrated pest management for collections*. Swindon: English Heritage.

## Schedule

January 21, Week 1

**Introduction: Course objectives**

### Readings

- NEDCC. (2008). *Resources: Preservation leaflets*. Retrieved January 18, 2016, from <http://www.nedcc.org/resources/leaflets.list.php>

Person-Harm, A., & Cooper, J. pp. 265-276.

Wilson, W. K. (1995). Environmental guidelines for the storage of paper records. In *NISO Standards*. Retrieved January 18, 2016, from <http://www.niso.org/standards/resources/tr01.pdf>

### **January 28, Week 2**

#### **Temperature and relative humidity**

#### **Readings**

Boersma, F., Brokerhof, A., van den Berg, S., & Tegelaers, J. pp. 31-45.

Harvey, R., & Mahard, M. R. pp. 85-105.

Padfield, T., & Borchersen, K. pp. 11-17.

Person-Harm, A., & Cooper, J. pp. 13-42.

Thomson, G. pp. 66-127; 210-269.

### **February 4, Week 3**

#### **Agents of deterioration: Background and use**

#### **Readings**

Canadian Conservation Institute. (n.d.). Ten agents of deterioration. Retrieved January 18, 2016, from <http://www.cci-icc.gc.ca/resources-ressources/agentsofdeterioration-agentsdedeterioration/index-eng.aspx>

Read the following sections:

Deterioration by Light, UV and IR (Read to "Control of Light") <http://www.cci-icc.gc.ca/resources-ressources/agentsofdeterioration-agentsdedeterioration/chap08-eng.aspx>

Pollutants (Only need to read chart at top of page.) <http://www.cci-icc.gc.ca/resources-ressources/agentsofdeterioration-agentsdedeterioration/chap07-eng.aspx>

Deterioration by Incorrect Temperature, and the Most Vulnerable Collections (Read to Sources of Incorrect Temperature.) <http://www.cci-icc.gc.ca/resources-ressources/agentsofdeterioration-agentsdedeterioration/chap09-eng.aspx>

Deterioration by Incorrect Relative Humidity, and the Most Vulnerable Collections (Read to Sources of Incorrect Relative Humidity.) <http://www.cci-icc.gc.ca/resources-ressources/agentsofdeterioration-agentsdedeterioration/chap10-eng.aspx>

Person-Harm, A., & Cooper, J. pp. 1-11; 43-75.

Williams, E. pp. 149-155; 257-261.

### **February 11, Week 4**

#### **Risk analysis**

## Readings

- Ashley-Smith, J. (1999). *Risk assessment for object conservation*. Oxford: Butterworth Heinemann. pp.16-49.
- Brokerhof, A., T. Luger, B. Ankersmit, F. Bergevoet, R. Schillemans, P. Schoutens, T. Miller, J. Kiers, G. Meuthing, and R. Waller. 2005. Risk assessment of Museum Amstelkring: application to an historic building and its collections and the consequences for preservation management. Pp. 590-596 in *Preprints of the ICOM-CC 14<sup>th</sup> Triennial Meeting, The Hague 12-16 September 2005*. International Council of Museums and James & James Publishers, London.
- Cassar, M., & Pender, R. (2005, March). The impact of climate change on cultural heritage: Evidence and response. *14th triennial meeting, The Hague: Preprints ICOM Committee for Conservation, 14*, 610-616.
- Cloonan, M. V. pp. 29-38; 66-69.
- Harvey, R., & Mahard, M. R. pp. 31-58.
- Michalski, S. (2013). [Stuffing everything we know about mechanical properties into one collection simulation]. In J. Ashley-Smith, A. Burmester, & M. Eibl (Eds.), *Climate for collections: Standards and uncertainties 2013* (pp. 349-361). London: Archetype Publications, in association with Doerner Institut, Munich.
- Padfield, T., & Borchersen, K. pp. 107-114; 115-121.
- Person-Harm, A., & Cooper, J. pp. 77-125; 199-217.
- Walker, A., & Foster, J. (2009, February 6). *Statistical tools for the evaluation of preservation* (Monograph). Retrieved January 18, 2016 from <http://conference.ifla.org/past-wlic/2009/92-walker-en.pdf>
- Waller, R., and S. Michalski. 2005. A paradigm shift for preventive conservation, and a software tool to facilitate the transition. Pp. 733-738 in *Preprints of the ICOM-CC 14<sup>th</sup> Triennial Meeting, The Hague 12-16 September 2005*. International Council of Museums and James & James Publishers, London.

## February 18, Week 5 Storage and housing Pollutants and dust

## Readings

- AIC. (2015). *STASH. Storage techniques for Art, Science and History*. Retrieved December 18, 2016 from <http://stashc.com/>
- Hatchfield, P. (2002). *Control of pollutants in the museum environment: Practical strategies for problem solving in design, exhibition and storage*. London: Archetype.
- National Archives of Australia. (2013). About the photographic activity test. Retrieved January 18, 2016, from <http://www.naa.gov.au/records-management/agency/preserve/physical-preservation/pat.aspx>
- Padfield, T., & Borchersen, K. pp. 63-65; 67-72; 135-144; 229-235; 237-243.

**February 25, Week 6**  
**Understanding and implementing microclimates**  
**Outreach, Setting agendas**

**Readings**

Padfield, T., & Borchersen, K. pp. 27-35; 191-198; 199-206; 253-260; 261-266.  
Williams, E. pp. 33-36; 37-44; 121-130; 205-211; 212-221; 232-243.

**March 3, Week 7**  
**Guest speaker: Joe Reyes**

**Readings**

Getty Conservation Institute, & Heritage Preservation. (1990). The conservation assessment: A tool for planning, implementing and fund-raising. In *CAP publications at your fingertips*. Retrieved January 18, 2016, from <http://www.heritagepreservation.org/CAP/docs/Handbook4Assessors.pdf>  
Harvey, R., & Mahard, M. R. pp. 147-181; 183-222; 223-253; 255-291; 317-325; 327-341.  
Lavedrine, B., Gandolfo, J.-P., & Monod, S. pp. 113-145.

**March 10, Week 8**  
**Integrated pest management**

**Readings**

Krug, S., & Hahn, O. (2014). Portable X-ray fluorescence analysis of pesticides in the textile collection at the Herman Historical Museum, Berlin. *Studies in Conservation*, 59(6), 355-366.  
Maekawa, S., & Elert, K. pp. 15-57.  
Padfield, T., & Borchersen, K. pp. 57-60.  
Pinniger, D., & Meyer, A. (2015). *Integrated pest management in cultural heritage*. London: Archetype.  
Pinniger, D. (1990). *Pest management in museums, archives and historic houses in museums*. London: Archetype.  
Winsor, P., Pinniger, D., Bacon, L., Child, B., Harris, K., Lauder, D., . . . Xavier-Rowe, A. (Eds.). (2012). *Integrated pest management for collections*. Swindon: English Heritage.

**March 17, SPRING BREAK**

**March 24, Week 9**



## Lighting

### Readings

Appelbaum, B. pp. 65-95.

Boersma, F., Brokerhof, A., van den Berg, S., & Tegelaers, J. pp. 47-60.

Heritage Collections Council (n.d.). Common deterioration processes. *Summary of gallery illumination: LED lighting in today's museums hosted by The Smithsonian American Art Museum on Friday, March 1st, 2013*. (n.d.). Retrieved January 18, 2016, from [http://www.americanart.si.edu/conservation/program\\_docs/aic\\_summary.pdf](http://www.americanart.si.edu/conservation/program_docs/aic_summary.pdf)

IAMFA. (2013). *A practical guide for sustainable climate control and lighting in museums and galleries*. Retrieved January 18, 2016, from [http://www.magsq.com.au/\\_dbase\\_upl/APracticalGuideforSustainableClimateControlandLightinginMuseumsandGalleries.pdf](http://www.magsq.com.au/_dbase_upl/APracticalGuideforSustainableClimateControlandLightinginMuseumsandGalleries.pdf)

Lavedrine, B., Gandolfo, J.-P., & Monod, S. pp. 146-175.

Padfield, T., & Borchersen, K. pp. 51-56.

## March 31, Week 10 Security, transport and events Exhibits

### Readings

Boersma, F., Brokerhof, A., van den Berg, S., & Tegelaers, J. pp. 107-122.

Conservation Center for Art and Historic Artifacts. (2014.) Preservation resource materials. Retrieved January 18, 2016, from <http://www.ccaha.org/publications>

Harvey, R., & Mahard, M. R. pp. 133-146.

Johnson, A. P., Hannen, W. R. & Zuccari, F. (2013). Using case studies to examine the decision-making process for cleaning ethnographic objects. *Journal of the American Institute for Conservation*, 52, 30-47.

Noehles, M., & Niehus, L. (2014). Mounting works on paper with neodymium magnets. *Restaurator*, 35(3/4), 231-248. <http://dx.doi.org/10.1515/res-2014-0016>

Padfield, T., & Borchersen, K. pp. 99-105.

Person-Harm, A., & Cooper, J. pp. 219-247.

Williams, E. 57-65; 66-75.

## April 7, Week 11 Environmental standards debate

### Readings

Ashley-Smith, J., & Burmester, A. (2013). *Plus-minus debate*. Retrieved January 18, 2016, from <http://www.doernerinstitut.de/downloads/Plus-Minus-Debate.pdf>

Ashley-Smith, J., Burmester, A., & Eibl, M. (Eds.). (2013). *Climate for collections: Standards and uncertainties 2013*. London: Archetype Publications, in association with Doerner Institut, Munich.

- Bickersteth, J. (2014). Environmental conditions for safeguarding collections: What should our set points be? *Studies in Conservation*, 59(4), 218-224.
- Bichlmair, S., Holl, K., & Kilian, R. (2012). The moving fluctuation range - a new analytical method for evaluation of climate fluctuations in historic buildings. In J. Ashley-Smith, A. Burmester, & M. Eibl (Eds.), *Climate for Collections: Standards and Uncertainties* (pp. 439-450). London: Archetype.
- Bolliger, A., & Strobl, J. (2013). *Real savings discussion*. Retrieved January 18, 2016, from [http://www.doernerinstitut.de/downloads/The\\_Real\\_Savings\\_EN.pdf](http://www.doernerinstitut.de/downloads/The_Real_Savings_EN.pdf)
- Burmester, A., & Kostowski, R. (2013). *Stability versus stress discussion*. Retrieved January 9, 2015, from [http://www.doernerinstitut.de/downloads/Stability\\_versus\\_Stress.pdf](http://www.doernerinstitut.de/downloads/Stability_versus_Stress.pdf)
- Doerner Institute. (20). Retrieved January 18, 2016, from [http://www.doernerinstitut.de/en/projekte/Bizot/bizot\\_1.html](http://www.doernerinstitut.de/en/projekte/Bizot/bizot_1.html)
- Image Permanence Institute. (n.d.). Sustainable preservation practices for managing storage environments. Retrieved January 18, 2016, from <http://www.ipisustainability.org/workshop-presentations/>
- Padfield, T., & Borchersen, K. pp. 129-134; 145-155; 157-163; 213-219.
- Person-Harm, A., & Cooper, J. pp. 151-197.
- The National Archives. *PAS 198:2012 Specification for managing environmental conditions for cultural collections*. London: British Standards Institution.

**April 14, Week 12**  
**Defining preventive conservation**

**Readings**

- Hawks, C. A., & Butts, S. H. pp. 515-549.
- Harvey, R., & Mahard, M. R. pp. 3-13; 15-30.
- Padfield, T., & Borchersen, K. pp. 123-128.

**April 21, Week 13**  
**Disaster recovery**

**Readings**

Will be given during class.

**April 28, Week 14**  
**Mold prevention and removal**

**Readings**

- Padfield, T., & Borchersen, K. pp. 185-189.
- Sequeira, S. O., Cabrita, E. J., & Macedo, M. F. (2014). Fungal biodeterioration of paper: How are paper and book conservators dealing with it? An international survey. *Restaurator*, 35(2), 181-199. <http://dx.doi.org/10.1515/rest-2014-0005>

**May 5, Week 15  
Review**