

Long Island University  
Palmer School of Library and Information Science  
**LIS 657**  
**Introduction to Preservation**

Spring 2018

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### **Course Description**

An introduction to the principles and practices of library and archives preservation, including examination of the composition of paper, book, and non-book materials; agents that contribute to deterioration; current methods for preventing and remediating deterioration, including environmental controls, disaster planning and recovery, binding, digitization and other reformatting technologies, collection maintenance and rehousing; ensuring long-term access to electronic content; and the management of preservation efforts, including preservation assessment and decision-making; and the standards and professional ethics that support them.

### **Course Objectives**

- To understand key concepts and terms in preservation, including the major causes of deterioration of library and archival materials in analog and electronic formats.
- To build a conceptual framework for considering the range of issues involved in planning for and carrying out preservation activities.
- To recognize and appreciate preservation as one of the central functions in libraries and archives, and to explore the relationships between preservation and other library functions.
- To become familiar with and evaluate print and online information sources on preservation.

### **\*Student Learning Objectives\***

·Utilize a broad range of systems and technologies to manage and deliver information. Students will be evaluated on:

- The written assignments, which require them to apply information from class sessions and readings to solve case studies of real-world preservation situations.
- The assigned readings, which students are expected to discuss in class.

### Contact Information

Feel free to contact me at [eh2124@columbia.edu](mailto:eh2124@columbia.edu)  
My work phone number is 212-854-1336

### Course Requirements and Grading

There will be no final exam, but there will be a required weekly blog discussion, four short in-class exercises, a brief media presentation, and a final paper (see below). Class grades will be based on participation in classroom and blog discussions, in-class presentations, and the final project. Weekly assignments and the presentations will be given equal weight. The final project will be worth twice as much.

Attendance and participation: 60%

Written assignments and presentations: 40%

Per requirements of the Palmer school, distribution of time spent on this class is listed below:  
152 hours of assignments and activities calculated as follows:

Assignment or Activity	Hours
Class time (4 weeks at 300 minutes per class)	20
Assigned readings (4 weeks @ 11 hours/week)	44
Class blog; required weekly discussion on reading and/or class content (4 weeks @ 1.5 hour/week)	6
Short paper: Media preservation	20
Final Paper: 10-12 page research paper	60
TOTAL	150

### Course Readings

No up to date textbook on preservation is currently in print. Many of our basic readings will come from the Northeast Document Conservation Center's online course, Preservation 101, at <https://www.nedcc.org/preservation101/welcome>

**Class discussion via Discussions on Blackboard**

Because of our limited time in the classroom, we are supplementing our class discussion with a discussion forum on Blackboard. Each student is to contribute weekly. A space will be provided each week for students to discuss assigned readings and/or online viewings for that week. *Please make sure that your contributed content is focused only on the content for that week.* It is fine (and encouraged) to respond to one another's comments online and our discussions will be followed up in our face to face Saturday classes.

Posts will be graded as follows:

- Each post should be around 100-200 words, but you can go higher than that if you make every effort to be concise.
- Grammar, spelling, and writing skill *will* be a consideration for grading. Consider this a professional project and use the same care as you would with any other academic or professional endeavor
- When sources are quoted or referred to, they need to be cited. This does not have to be a formal footnote, but the author and the source where you found it should be referred to somewhere in your posting.
- Relevance to the topic at hand will also be graded as will the content of your post. Posts must consist of more than statements of liking or disliking an article or point of view. Rather, opinions must be backed up with facts and/or data
- Of course, all postings must be respectful, cordial and appropriate without exception

**Media Presentation:**

**Short Paper:** Each student will be randomly assigned a media type for which they should answer the questions that follow. Due Apr 8.

Your paper should be 2-3 pages long. Your sources must be cited in a consistent style. I recommend using the outline format below in order to keep it brief and organized. You should be able to find information on all the materials through the readings on the syllabus, but I encourage you to try to find other sources as well and include them.

- **Final Paper: Complete a Partial Preservation Assessment on a Library or Archive: Due April 25**
  1. Choose a library to conduct a preservation assessment. If you are currently working in a library, I would recommend that you choose that one, since you have access to more information about it. If not, you may choose another library (you are allowed to estimate on statistics, etc. if necessary for this exercise, but should try to answer most the questions as accurately as possible) – *your choice of library/archive will be due on or before April 8 class*
  2. Identify the library's name, the type of library it is (public, academic, etc), whom it serves, and the type of collections it houses. If it has a preservation department, describe it briefly.

3. Go to: <http://www.nedcc.org/resources/downloads/apnssg.pdf>
4. Fill out the "General Building Worksheet", the "Worksheet for Mixed Collections", and another specific collection worksheet of your choice (pdf files).
5. On a separate sheet make recommendations for improvements or changes based upon your findings, or, if you find that no changes are necessary, support that with your findings.

### Selected On-Line Resources

(URLS verified in January 2018)

AIC (American Institute for Conservation of Historic and Artistic Works)

<http://www.conservation-us.org>

In addition to information for professional conservators, includes brochures for the general public on caring for books, photographs, and other objects, and a service to locate professional conservators by specialty and by geographic location.

AMIA (Association of Moving Image Archivists) <http://www.amianet.org>

A non-profit professional association established to advance the field of moving image archiving by fostering cooperation among individuals and organizations concerned with the acquisition, description, preservation, exhibition and use of moving image materials.

CCI (Canadian Conservation Institution) [http://www.cci-icc.gc.ca/main\\_e.aspx](http://www.cci-icc.gc.ca/main_e.aspx)

Among other resources, home of BCIN, the Bibliographic Database of the Conservation Information Network, the Web's most complete freely available bibliographic resource for the conservation, preservation and restoration of cultural property, at [http://www.bcin.ca/English/home\\_english.html](http://www.bcin.ca/English/home_english.html)

CoOL (Conservation On-Line) <http://cool.conservation-us.org/>

Devoted to all aspects of preservation and conservation of library, archival, and museum materials. Includes full-text and links to other resources and organizations; organized by topic. A source of disaster response information. Includes links to many online preservation and conservation-related dictionaries, encyclopedias, and other resources at <http://palimpsest.stanford.edu/lex> Also home to Conservation DistList, a moderated list dealing with conservation and preservation. ConsDist archives can be searched on CoOL.

CLIR (Council on Library and Information Resources) <http://www.clir.org>

CLIR's goal is helping to ensuring that information resources needed by scholars, students, and the public are available for future generations. They publish reports and provide links to discussions of preservation, electronic resources, scholarly information, and digital libraries.

Digital Curation Centre <http://www.dcc.ac.uk/>

A UK-based center to support expertise and practice in data curation and digital preservation across communities of practice.

IASA (International Association of Sound and Audiovisual Archives)

<http://www.iasa-web.org/>

IASA functions as a medium for international co-operation between archives that preserve recorded sound and audiovisual documents. It produces standards for preservation activities.

ICA (International Council on Archives) Photographic and Audiovisual Archives Working Group

<http://www.ica.org/5074/about-photographic-and-audiovisual-archives-group/about-photographic-and-audiovisual-archives-working-group.html>

Provides useful links and bibliographies.

IFLA (International Federation of Library Associations) Preservation and Conservation Section

<http://www.ifla.org/preservation-and-conservation>

The Section is concerned with the preservation of the world's documentary heritage and provides a forum for exchange, development and dissemination of knowledge and experience dealing with theories, policies and practices for the preservation of all recorded knowledge, regardless of the storage medium. See in particular *First Do No Harm: Register of Standards, Codes of Practice, Guidelines ... Relating to Preservation and Conservation*, 2005, at

<http://www.ifla.org/VII/s19/pubs/first-do-no-harm.pdf>

IPI (Image Permanence Institute) <http://www.imagepermanenceinstitute.org>

IPI is a university-based, nonprofit research laboratory devoted to scientific research in the preservation of visual and other forms of recorded information. Areas of interest are research on the stability of information media, environmental monitoring and standards, standards for imaging media preservation, and training of photograph conservators.

Library of Congress:

- Preservation Directorate <http://lcweb.loc.gov/preserv>
- Digital library collections and programs <http://www.loc.gov/library/libarch-digital.html>
- Digital Preservation <http://www.digitalpreservation.gov>.
- Federal Agencies Digitization Guidelines Initiative (FADGI) <http://www.digitizationguidelines.gov/>
- NDSA (National Digital Stewardship Alliance)  
A collaboration among government, academic, and business organizations to preserve the distributed national digital collections <http://www.digitalpreservation.gov/ndsas>

NEDCC (Northeast Document Conservation Center) <http://www.nedcc.org>

NEDCC is the largest nonprofit regional conservation center in the United States. As well as providing disaster recovery assistance, surveys and conservation and reformatting services, it carries on extensive educational activities and provides useful publications online.

**Class 1; Part 1 (12:30-2pm) March 18 Introduction to Preservation**

- Definitions, purposes, elements of preservation.
- Qualities of original materials.

Readings for Class 1, Part 1:

Northeast Document Conservation Center. Preservation 101. Take a brief look at this online course. We will be utilizing it throughout the semester.

<https://www.nedcc.org/preservation101/welcome>

Wikipedia. *Preservation (Library and Archival Science)*. Read through the entire entry for this and it will give you a good introduction to what we will be covering in the course.

[https://en.wikipedia.org/wiki/Preservation\\_\(library\\_and\\_archival\\_science\)](https://en.wikipedia.org/wiki/Preservation_(library_and_archival_science))

Modern Language Association. 2003. *Statement on the significance of primary records*

[http://www.mla.org/primary\\_records1](http://www.mla.org/primary_records1)

**Class 1, Part 2 (2-4pm) March 18 Paper, Books, and Binding**

- History of paper manufacturing; rag, wood pulp, and machine paper.
- Paper permanence and durability; acidic and acid-free paper.
- Deacidification of acidic paper.
- Library standards.
- Parts of the book; book construction.
- Library binding.
- In class exercise

Readings for Class 1, Part 2:

*Permanence of paper for publications and documents in libraries and archives*. ANSI/NISO Z39.48 1992 (R2002). Go to <http://www.niso.org/kst/reports/standards/> and search for this item, click on View Details, and then on the link at Final Document (PDF) [Z39-48-1992R2002.pdf](http://www.niso.org/kst/reports/standards/Z39-48-1992R2002.pdf).

Northeast Document Conservation Center. Preservation 101, Session 4 Caring for Paper Collections: <https://www.nedcc.org/preservation101/session-4>

Merrill-Oldham, Jan and Paul Parisi. 2008. *Guide to the Library Binding Standard*. <https://bomi.memberclicks.net/standards>

**Class 1, Part 3 (4-5:30 pm) March 18 Environmental Controls and Housing**

- Environmental controls: temperature, humidity, light, pollution.
- Housing and protective enclosures.

Northeast Document Conservation Center. Preservation 101, Session 2. The Building and Environment. Read all sections

<https://www.nedcc.org/preservation101/session-2>

Northeast Document Conservation Center. Preservation Leaflets. Read all leaflets in Section 2: The Environment. <https://www.nedcc.org/free-resources/preservation-leaflets/overview>

“Integrated Pest Management.” NEDCC Leaflet 3:10.

<https://www.nedcc.org/free-resources/preservation-leaflets/3.-emergency-management/3.10-integrated-pest-management>

Assignment Due on April 9:

Each student will be randomly assigned a media type for which they should answer the questions that follow.

Each paper should be 2-3 pages long. Your sources must be cited – I am not choosy about the citation style, just be sure to be consistent. I recommend using the outline format below in order to keep it brief and organized. You should be able to find information on all the materials through the readings on the syllabus, but I encourage you to try to find other sources as well and include them.

1. Give a general description of the media (dates, used, date when obsolete, if applicable) as well as how to identify it.
2. How does one play it? (if applicable) For photographs, what technology/methods were used to produce?
3. What are the materials from which it is composed?
4. What are the possible effects of:
  - a. Temperature
  - b. Humidity
  - c. Light
  - d. Air pollution/dust
  - e. Poor handling
5. Name the three biggest risks for damage of this media
6. Name three important preservation strategies or considerations for this media



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1. Audio cylinders (ie, wax cylinders)
  2. CDs
  3. Microgroove discs (LPs)
  4. Replicated coarse groove discs  
(shellacs)
  5. Instantaneous discs  
(recording/acetate)
  6. Acetate audiotape
  7. Nitrate film
  8. Polyester audiotape (open reel)
  9. Wire recordings
  10. Cassette tapes
  11. Digital audiotape (DAT)
  12. Daguerrotypes
  13. Collodion negatives (glassplate)
  14. Video cassettes (VHS)

## **Class 2, Part 1 (12:30-3 pm) March 25      Audio-Visual and Electronic Materials**

- Construction and causes of deterioration of photographic media, phonographic disks, magnetic media, and optical media.
- Issues relating to preservation of digital information.
- Media papers due

### Readings for Class 2, Part 1

Edmondson, Ray. 2004. *Audiovisual archiving: philosophy and principles*  
Ch. 5 Preservation, pp. 44-51, <http://unesdoc.unesco.org/images/0013/001364/136477e.pdf>

Clarke, Susie and Franziska Frey. 2003. *Care of photographs*, Ch. 2-3, pp. 7-25  
<https://meppi.me/wp-content/uploads/2017/07/CareOfPhotographs.pdf>

Schuller, Dietrich. 2008 *Audio and video carriers*.  
[http://www.tape-online.net/docs/audio\\_and\\_video\\_carriers.pdf](http://www.tape-online.net/docs/audio_and_video_carriers.pdf)

*Film preservation guide*, Chp. 2 Understanding film and how it decays, pp. 6-18.  
<http://www.filmpreservation.org>  
(click on Preservation Basics, then Film Preservation Guide)

NEDCC. *Understanding IRENE*.  
<https://www.nedcc.org/audio-preservation/understanding-irene>

Cowen, Ron. "Ghostly Voices From Thomas Edison's Dolls Can Now Be Heard" *New York Times*. May 4, 2015.  
<http://www.nytimes.com/2015/05/05/science/thomas-edison-talking-dolls-recordings.html>

Also (this isn't an assignment, just something fun): On the Film Preservation site, you can stream full length films. I recommend "Walk -- You Walk!" from 1912. The story is fun and you'll also see what nitrate damage does to the quality of a film. Here's the link:  
<http://www.filmpreservation.org/preserved-films/screening-room/walk-you-walk-1912> (Links to an external site.)

In class exercise:

Split into groups of 3-4:

1. Read the HVAC report from a Columbia branch library.
  2. See how many problems you can identify. List them and suggest solutions to each one. Some solutions to the problems could be very expensive. Suggest alternatives that could be followed in case budgets are limited.
- Construction and causes of deterioration of photographic media, phonographic disks, magnetic media, and optical media.
  - Issues relating to preservation of digital information.

**Class 2, Part 2 (3-4:30pm) Mar 25 Handling, Security, Disaster Preparedness**

- Proper care and handling of books and other library materials.
- Issues relating to security.
- Nature of library disasters.
- Planning for disaster prevention.

Library of Congress. Care, Handling and Storage of Books

<http://www.loc.gov/preservation/care/books.html>

ALA/LLAMA Guidelines for Library Security, 2010

<http://www.ala.org/llama/sites/ala.org.llama/files/content/publications/LibrarySecurityGuide.pdf>

Liemer, Ross. 2005. "Yale map heist stirs University concern". The Daily Princetonian.

<http://web.archive.org/web/20120418231225/http://www.dailyprincetonian.com/2005/10/12/13431/>

Take a look at the demo for dplan, NEDCC's disaster plan <http://www.dplan.org/>

Northeast Document Conservation Center. Preservation 101. Read all of Session 8, "Emergency Preparedness" <https://www.nedcc.org/preservation101/session-8>

Buchanan, Sally. 2007. "Emergency Salvage Of Wet Books And Records."

<https://www.nedcc.org/free-resources/preservation-leaflets/3.-emergency-management/3.6-emergency-salvage-of-wet-books-and-records>

Albright, Gary. 2007. "Emergency Salvage Of Wet Photographs."

<https://www.nedcc.org/free-resources/preservation-leaflets/3.-emergency-management/3.7-emergency-salvage-of-wet-photographs>

Lindblom Patkus, Beth. 2007. "Emergency Salvage Of Moldy Books And Paper."

<https://www.nedcc.org/free-resources/preservation-leaflets/3.-emergency-management/3.8-emergency-salvage-of-moldy-books-and-paper>

Techsoup Disaster Recovery Guide. This guide is a bit lengthy -- you don't need to read through the whole thing thoroughly - just skim and get an idea of what disaster recovery for digital materials entails and consider in what ways it is similar to and different from other types of disaster planning and recovery: <http://www.techsoup.org/SiteCollectionDocuments/resilient-organization-pdf-document.pdf>

Required viewing: Restoration of Books:

[http://www.youtube.com/watch?feature=player\\_detailpage&v=Ip6698z\\_QmY](http://www.youtube.com/watch?feature=player_detailpage&v=Ip6698z_QmY)

**Class 2, Part 3 (4:30-5:30 pm) Mar 25 Conservation**

- Construction and causes of deterioration of photographic media, phonographic disks, magnetic media, and optical media.
- Issues relating to preservation of digital information.
- Media presentations

Readings for Class 2, Part 3:

Northeast Document Conservation Center. Preservation 101, Session 3, Part 3 Conservation Treatment. <https://www.nedcc.org/preservation101/session-3/3conservation-treatment>

Sturman, Shelley G., Martin Burke, Doris A. Hamburg. 2000 Guidelines for selecting a conservator.

<http://www.conservation-us.org/about-conservation/how-to-choose#.Ux3agXe2yuM>

American Institute for Conservation. 1998. Code of ethics and guidelines for practice.

<http://www.conservation-us.org/about-us/core-documents/code-of-ethics#.Ux3aO3e2yuM>

National Park Service. 2012. NPS Museum Handbook, Part I (2012)

Conservation Treatment. Read all, paying particular attention to sample treatment reports at the end <http://www.nps.gov/history/museum/publications/mhi/Chap8.pdf>

**Class 3 Part 1 12:30-3:30 April 8 Preservation Reformatting**

- Nature of copying and retention of the original.
- Copyright issues for preservation.
- Reformatting technologies: microfilming, photocopying, digitization.
- Project management and vendor relations.

Readings for Class 3 Part I:

Abby Smith. 2001. The Evidence in hand: The report of the Task Force on the Artifact in Library Collections, pp. 8-16 (Ch. 2 Artifact in question).

<http://www.clir.org/pubs/abstract/pub103abst.html>

NEDCC Preservation 101, Session 7, Read entire Preservation Reformatting Section (7):

<https://www.nedcc.org/preservation101/session-7>

Columbia University Libraries, Copyright Advisory Office. Copyright Basics. Read through entire section, including the links at the bottom of page

<https://copyright.columbia.edu/basics.html>

Association for Recorded Sound Collections, Technical Committee. 2009. Preservation of Archival Sound Recordings [http://www.arsc-audio.org/pdf/ARSCTC\\_preservation.pdf](http://www.arsc-audio.org/pdf/ARSCTC_preservation.pdf)

Federal Agencies Digitization Initiative Still Image Working Group. *Technical Guidelines for Digitizing Cultural Heritage Materials: Creation of Raster Image Master Files.*

<http://www.digitizationguidelines.gov/guidelines/digitize-technical.html>

Click on pdf and read: I. Introduction (p. 8-11) IV. Digitization Specifications for everything up to paintings p. 18-46, equipment (52-62), metadata (74-85) quality management (86-90).

**Class 3 Part 2 (3:30-5:30 pm) and Class 4 Part 1 (12:30-2 pm) April 8 and 15**  
**Preservation of Digital Resources**

- Preservation of digital resources
- Importance of metadata for preservation of electronic resources.
- Digital repositories
- Preservation of e-journals, websites, etc.

Readings for digital preservation:

Definitions of Digital Preservation.

<http://www.ala.org/ala/mgrps/divs/alcts/resources/preserv/defdigpres0408.cfm>

Caplan, Priscilla. 2009. "Understanding PREMIS." Library of Congress.

<http://www.loc.gov/standards/premis/understanding-premis.pdf>

CCSDS, 2011. Trusted Digital Repository Checklist. Read over this pdf, noting the OAIS roles and other issues related to trustworthiness in repositories.

<https://public.ccsds.org/pubs/652x0m1.pdf>

Houghton, Bernadette. "Trustworthiness: Self-assessment of an Institutional Repository against ISO 16363-2012". *D-Lib Magazine*. Volume 21, Number 3/4 (March/April 2015):

<http://www.dlib.org/dlib/march15/houghton/03houghton.html>

Day, Michael. 2008. "Toward Distributed Infrastructures for Digital Preservation: The Roles of Collaboration and Trust." *International Journal of Digital Curation*.

<http://www.ijdc.net/index.php/ijdc/article/view/60>

Lavoie, Brian. January 2014. The Open Archival Information System Model: Introductory Guide. 2nd edition. DPC Technology Watch Series Report, 2014.

<http://www.dpconline.org/docs/technology-watch-reports/1359-dpctw14-02/file>

Collaborative Electronic Records Project (Smithsonian Institution Archives and Rockefeller Archive Center). Read through documentation. Downloading the software is not necessary!

<http://siarchives.si.edu/ceerp/parserdownload.htm>

Prom, Christopher. 2011. *Preserving Email*. DPC Technology Watch Report 11-01. Digital Preservation Coalition. <http://www.dpconline.org/publications/technology-watch-reports>

LePore, Jill. "The Cobweb." *The New Yorker Magazine*. , 26 Jan. 2015. <http://www.newyorker.com/magazine/2015/01/26/cobweb>

**Class 4, Part 2 (2-3:30pm) April 15**      **Preservation Assessment, Surveys, & Planning**

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- Elements of preservation programs.
- Institutional assessments.
- Condition surveys.
- Developing a preservation plan based on the surveys.
- Preservation policies.

Readings for Class 7, Part 1:

NEDCC Preservation 101, Introduction to Preservation, section on Assessing Collections  
<https://www.nedcc.org/preservation101/preservation-assessment>

NEDCC Preservation Leaflet 1.2. Preservation Assessment and Planning.  
<https://www.nedcc.org/free-resources/preservation-leaflets/1.-planning-and-prioritizing/1.2-preservation-assessment-and-planning>

NEDCC. Preservation 101. Session 9: Building a Preservation Program  
<https://www.nedcc.org/preservation101/session-9>

Blue Ribbon Task Force (2010). “Sustainable Economics for a Digital Planet: Ensuring Long-Term Access to Digital Information.” Final Report of the Blue Ribbon Task Force on Sustainable Digital Preservation and Access <http://brtf.sdsc.edu/>

**Class 4, Part 3 (3:30-5 pm) April 15 Selection for Preservation and Wrap Up**

- Making preservation decisions.
- Criteria for preservation selection.
- Preservation of the original/preservation of content.

Readings for Class 4, Part 3:

Schonfeld, Roger. 2009 What to Withdraw: Print Collections Management in the Wake of Digitization. <http://www.sr.ithaka.org/research-publications/what-withdraw-print-collections-management-wake-digitization>

Leslie Johnston. 2008 Principles and Activities of Digital Curation for Developing Successful and Sustainable Repositories. In Katherine Skinner and Martin Halbert, eds. *Strategies for Sustaining Digital Libraries* (Emory University, 2008). Read this article only – p. 84-94 <http://webarchives.cdlib.org/sw1pn8zr7w/http://www.metascholar.org/publications/StrategiesforSustainingDigitalLibraries.pdf>

Michael Buckland. 1992. *Redesigning Library Services: A Manifesto*. Chicago: ALA,. Read Chapter 6: Collections Reconsidered <http://sunsite.berkeley.edu/Literature/Library/Redesigning/html.html>

NEDCC Preservation 101, Introduction to Preservation, section on Selection for Preservation <https://www.nedcc.org/preservation101/session-9/9selection-for-preservation>





