

The University of Iowa
School of Library and Information Sciences
Spring 2020

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| Course | SLIS 6145: Digital Preservation and Stewardship |
| Course Schedule | Mondays 9:30-12:15 |
| On Campus | 3092 Main Library |
| Instructor | Dr. Lindsay Mattock |
| Office Location | 3072 Main Library |
| E-mail | lindsay-mattock@uiowa.edu |
| Office Hours | by appointment lindsaymattock.net/officehours.html |

Course Overview

This course will introduce the concepts, theories, and practices related to the preservation and continued stewardship of born-digital and digitized materials. Taught from an archival perspective this course will focus on the current methods of collection, maintenance, and access to digital collections in libraries, archives, and museums.

Through assignments and in-class activities, students will become familiar with the tools, workflows, and processes currently utilized by LIS professionals to manage digital materials.

Upon successful completion of this course, students will be able to:

- Develop a familiarity with the history of digital preservation and curation and the development of methods and theories related to these practices
- Become conversant with the key concepts and terminology of digital preservation, curation, stewardship, and management of digital collections
- Identify, assess, and apply standards for the preservation and continued management of digital objects
- Identify and apply descriptive and preservation metadata to digital and digitized objects
- Identify and make informed decisions regarding the software and hardware available for creating and maintaining digital collections

Required Textbook

There are no required textbooks for this course. The required readings for each week are available through the University Libraries or on the course ICON site. The books that appear on the syllabus have been placed on Reserve in the Main Library.

Semester at a Glance

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| Week 1 January 27 | Introduction to Digital Preservation |
| Week 2 February 3 | Digital Objects - Materiality |
| Week 3 February 10 | Digital Objects - Formats |
| Week 4 February 17 | Text |
| Week 5 February 24 | Images |
| Week 6 March 2 | Audio |
| Week 7 March 9 | Moving Image |
| March 16 | Spring Break |
| Week 8 March 23 | Selection and Appraisal |
| Week 9 March 30 | Strategies and Workflows |
| Week 10 April 6 | Audacity and Editing |
| Week 11 April 13 | Repositories |
| Week 12 April 20 | Access |
| Week 13 April 27 | Ethics |
| Week 14 May 4 | Podcast Reflection and Preservation Plans |

Course Requirements and Grading

Grading Policy

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|----|------|----|------|
| A | 4.0 | C+ | 2.33 |
| A- | 3.67 | C | 2.00 |
| B+ | 3.33 | C- | 1.67 |
| B | 3.00 | D | 1.00 |
| B- | 2.67 | F | 0 |

Your work throughout the term will be evaluated according to the assignment expectations and graded on this 4.0 scale. Please note that a B- does not count towards your degree progression and the course will have to be retaken (see "Academic Progress" in the *SLIS Student Handbook* <https://slis.grad.uiowa.edu/current-students>).

Assignments at a Glance

| Assignment | Percentage | Due Date |
|------------------------------|------------|-----------------|
| Attendance and Participation | 15% | Throughout term |
| Weekly Projects | 15% | Throughout term |
| Digital Preservation Podcast | 35% | April 13 |
| Digital Preservation Plan | 35% | May 11 |

Participation

Individual Assignment

Weeks 1-14

15% of total grade

Each week you are responsible for contributing to the class discussion and activities. This means that you should arrive in class prepared to discuss the required readings, lead discussion, and collaborate with your classmates. Your contributions should demonstrate that you have prepared for class by reading the assigned materials and organized your thoughts, observations, and questions. Regular and punctual attendance is expected. Your attendance and participation will be assessed each week and a grade will be evaluated at the end of the term according to the following rubric:

| Requirement | Percentage | Expectations |
|-------------|------------|---|
| Attendance | 20% | You attend all of the required class sessions in the mode in which you are enrolled, arrive on-time for class, and participate in the class activities until dismissed. If you have an extenuating circumstance or religious observance that prevents you from fully participating in a class session, please contact the professor in advance. |

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| Participation | 80% | You engage in course discussion sharing your observations, questions, and insights every week. You collaborate with classmates on group activities and assignments completing your assigned tasks and allowing everyone in the group to have an equal voice. Your contributions demonstrate maturity and collegiality, respecting the diversity of voices in the classroom. |
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Weekly Projects

Individual Assignment

As Assigned

15% of total grade

Over the course of the term we will complete a number of hands-on activities that put theory into practice. The projects will build from the assigned readings and lecture materials, demonstrating how the concepts we learn are employed in digital preservation contexts. You will complete these activities during the class session and submit your work to the appropriate ICON assignment link before our next class meeting. You may work together in small groups, but each student must submit their original work and will be graded individually. Each project will be graded according to the following rubric with your scores averaged together at the end of the term to determine your final mark.

| Requirement | Percentage | Expectations |
|--------------|------------|---|
| Completeness | 50% | Your assignment materials demonstrate that every step of the project has been completed. |
| Correctness | 15% | Every step of the project has been correctly completed, following the specific details outlined in the instructions. |
| Reflection | 35% | The responses to the reflection questions demonstrate that the student has engaged the ideas, topics, and concepts from the readings and lectures. The responses are detailed and complete, fully engaging the questions and move beyond a simple recounting of steps or summary of concepts, to demonstrate an analysis of the experience and clear understanding of the concepts. |

Digital Preservation Podcast

Team Assignment

35% of final grade

Due Monday, April 13

While the LIS community has established best practices for digital preservation, practices and workflows vary across institutional contexts based on local resources and infrastructures as well as the nature of the digital materials collected. This project provides an opportunity for you to work from the perspective of a content creator by building digital content, while also learning from professionals in the field. Working in small groups, you will learn how to produce an audio podcast and interview a archival professional to learn more about the diverse range of practices in the field. We will complete this project in a series of steps as you learn more about the recording technology and how to conduct an interview.

Podcast Timeline:

- *March 2 (Week 6):* team assignment and interview selection, introduction to interview techniques and podcasting technology
- *March 9 (Week 7):* Draft questions for interview due
- *March 23-April 12 (Weeks 8-10):* Record podcasts
- *April 6 (Week 10):* Podcast editing workshop
- *April 13 (Week 11):* Podcasts due

We will listen to the podcasts that we produce as part of our assigned reading during Weeks 12 and 13. The podcasts will also serve as an example collection for your final assignment, the Digital Preservation Plan. The podcast will be graded according to the following rubric. All members of the team will receive the same grade for this assignment.

| Requirement | Percentage | Expectations |
|---|------------|--|
| Interview Questions Due March 9th | 25% | The interview questions build from the course materials and the theories and concepts from the lecture and reading materials. The questions are specific to the interviewee and their home institution, demonstrating that the team has researched the institution, its holdings, and practices. The questions are open-ended and meet the oral history best practices. |
| Podcast Completeness | 10% | The podcast meets all of the following requirements: <ul style="list-style-type: none">- Includes intro and outro music from a copyright free source- Introduces each team member and the interviewee(s)- All team members participate in the podcast recording process and interview- Edited to remove excessive silences or other audio issues- Is 45-60 minutes in length after editing- Submitted in the appropriate audio format |

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| Podcast Content | 45% | The conversation builds from the course materials and the theories and concepts from the lectures and reading material and your prepared interview questions. Your questions and the conversation that emerges are specific to the interviewee and their home institution, demonstrating that the team has researched the institution, its holdings, and practices. Your questions demonstrate that you have accounted for the feedback from the professor on the draft questions. The conversation stays focused on relevant topics and maintains a professional tone. |
| Podcast Abstract | 20% | The podcast is accompanied by a short statement that lists all participants, summarizes the content, and provides proper attribution for the open and closing music. The abstract should also include a list of related resources that may include links, photos, articles, or other materials related to your episode. |

Digital Preservation Plan

Individual Assignment

35% of final grade

Due Monday, May 11

You will have an opportunity to create content during the podcast assignment using the tools and techniques of media creators, in the final assignment, you will use your knowledge of digital preservation to write a digital preservation plan for the podcasts as a digital collection. You can imagine that you are preserving the materials in an OAIS compliant repository at an institutional archives like the University of Iowa Libraries. Your preservation plan will account for the final version of the podcasts posted to ICON along with any associated files and materials from the production process. The proposal should contain the following sections and will be graded according to this rubric:

| Requirement | Percentage | Expectations |
|-------------------|------------|--|
| Executive Summary | 10% | The plan opens with a summary of the plan to follow. The summary should be no longer than 1 page single spaced. The summary should be the last element that you write, succinctly describing what is to follow. The Executive Summary should make use of bullet points and other organizational elements that will help the reader to easily identify the main points from your preservation plan. |

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| Description of the Collection | 10% | This section of the plan should clearly describe the collection and all of its component parts. The collection description should answer the following questions: When were the materials created and by whom? For what purpose? What types of materials are in the collection? Is the collection complete or will it continue to grow in the future? |
| Appraisal and Selection | 10% | Consider all of the materials in the collection, what will you preserve and what will be discarded? This section will document your decisions and the disposition of the materials in the collection. This section should reference relevant standards of practice. |
| Preservation Strategies | 20% | This section will discuss the preservation methods that you propose for the long-term preservation of the materials in the collection. How will the materials be preserved? What formats and file types will be used? How many copies? What storage methods will be used? This section will also describe the concerns for long-term preservation looking forward into the next decades. As with the previous section, your strategies should reference the relevant standards of practice from the field. |
| Metadata and Description | 20% | Along with preservation strategies, your proposal should address the metadata and descriptive standards that will be employed to document the preservation process and the collection's content. What metadata will be collected? What standards will be followed? Where and how will the metadata be stored? What levels/types of metadata will be used (inventory, descriptive, preservation, technical, administrative)? |
| Access and Ethics | 15% | This section will consider access to the collections. Building on your preservation strategies, what formats will be used to access the materials? Who will be allowed to access these materials and on what timeline? Are there materials that will be |

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| | | preserved but restricted to the public? What will access look like (will users access the metadata, individual files, transcripts, other surrogates)? What ethical concerns or other best practices informed your decisions? |
| Formatting and Organization | 5% | The document has been submitted as a single .pdf to the appropriate ICON assignment link. The document is well organized using headings, illustrations, and tables, were appropriate to guide the reader. Your name and a title for the assignment are listed on the first page of the document. |
| Clarity and Citation | 10% | The assignment demonstrates evidence of proofreading and the proper use of grammar and punctuation. Works referenced are properly cited using footnotes formatted according to the <i>Chicago Manual of Style</i> . |

Class Policies

Office Hours

Office hours are by appointment. You may schedule a meeting using the scheduling tool at <http://lindsaymattock.net/officehours.html>. If the times/dates available do not suit your schedule, please email the professor to arrange for another meeting time.

Course Expectations

This course depends on the active contributions of everyone in the classroom. *Regular attendance and participation in this course are expected.* Our class discussions depend on preparedness, participation, and exchange of ideas. Your participation will factor in the evaluation of your final grade (see the assignment description on pages 3-4).

Any successful learning experience requires mutual respect on the part of the student and the instructor. Neither the instructor nor student should be subject to others' behavior that is rude, disruptive, intimidating, or demeaning.

Instructor's responsibilities:

- Treat all students with courtesy and respect
- Be open to constructive input from students in the course

- Ensure that opportunities to participate are enjoyed equally by all students in the course
- Respond to student e-mail request in a timely manner (please allow 24hrs during the week and 48hrs over the weekends for my response)
- Return work in a timely manner (within two weeks of due date)

Student’s responsibilities:

- Come to class having read all of the materials due for that day and prepared to share your thoughts and ideas
- Refrain from coming late and leaving early
- Be an active participant in class discussion. To be prepared you must listen, think, and read
- When speaking, use courteous, respectful language and keep comments and questions relevant to the topic at hand
- Operate in discussion with respect, accountability, and patience. This is an environment for learning and we will all be challenged by the course material at times
- Be an active participant in the class project. Take responsibility for your contributions to the project, respond to your classmates in a timely manner, submit your work on the agreed upon deadlines, and be open to the constructive criticism

Assignment Expectations

All assignments are due on the date and time listed in the syllabus or on the ICON site. Unless there are extenuating circumstances, **late assignments will not be accepted and will receive a failing mark** (please refer to the policy below).

Assignments must demonstrate evidence of proofreading and the proper use of grammar and punctuation. Any citations should be formatted according to *Chicago Manual of Style* including footnotes and a works cited page.

Where appropriate, work must be double spaced, using a standard 12 pt. font, and 1” margins or otherwise formatted according to the assignment instructions.

Extenuating Circumstances and Incomplete Grades

Extenuating circumstances (illness, bereavement, etc.) may interfere with your ability to participate fully in the course. It is *your responsibility* to contact me as soon as possible if such a circumstance will prevent you from attending a class session or completing the coursework according to the set schedule. We will then work together to determine the best path forward for your particular situation. Incomplete grades and deadline extensions will only be considered under these circumstances.

Zoom and Illness or Inclement Weather

The spring semester often brings seasonal illness and dangerous weather conditions. While you are expected to attend class in the mode in which you enrolled, Zoom is an option for those in the on-campus section in these circumstances. However, you must first contact the professor to request permission to attend a session via Zoom. I must be notified at least 2 hours in advance of our scheduled class meeting. If you fail to notify the professor in advance, the attendance portion of your weekly Participation Grade will receive a failing mark.

Religious Observances

Students who plan to observe holy days that coincide with class meetings or assignment due dates are encouraged to consult with me during the first two weeks of classes so that we may develop a plan so that you may meet the requirements of the course and participate fully in religious observances.

Academic Integrity

All students are expected to adhere to the standards of academic honesty. Citation is one of the key competencies for information literate individuals and as such it is crucial for LIS professionals to learn the standards of and practice proper attribution. It is your responsibility to ensure that you are following these standards. Any student engaged in plagiarism, cheating, or other acts of academic dishonesty, will be subject to disciplinary action.

Plagiarism can be avoided by following the guidelines for proper citation and paraphrasing. Sections 13.1-13.6 of the *Chicago Manual of Style 16th Edition* <chicagomanualofstyle.org/16/ch13/ch13_toc.html> may be referenced for guidance. The University Writing Center <writingcenter.uiowa.edu> is another on-campus resource that is available to all students enrolled in course at the University.

Acts of plagiarism will be evaluated by the professor on a case-by-case basis and will be reported to the department. No credit will be given for plagiarized assignments. Minor transgressions will be documented in the student's departmental file. If the case is deemed to be sufficiently egregious, the offence will be reported to the Graduate College and may result in expulsion from the program. Please review the policies in the *School of Library and Information Science Student Handbook* <slis.grad.uiowa.edu/current-students> and the *Graduate College Rules and Regulations* <grad.uiowa.edu/manual-part-1-section-iv-academic-standing-probation-and-dismissal>.

Students with Disabilities

Many students require particular accommodations in the classroom. I am happy to work with you to ensure that you have the best learning experience possible. If you are or may be requesting an accommodation, please speak with me privately and contact Student Disability Services, 3015 Burge Hall, 319-335-1462/319-335-1498 (TTY), as early as possible in the term. This will ensure that we both have all the tools and information that we need to have a

successful semester working together. A comprehensive description of the services of that office can be obtained at <http://sds.studentlife.uiowa.edu>.

Reading and Topic Schedule

The reading schedule is subject to modification. The reading is to be completed before class each week. Assigned readings are available on ICON or through the University of Iowa Libraries.

Week 1 | January 27 – Introduction to Digital Preservation

Jackie Dooley, *The Archival Advantage: Integrating Archival Expertise into Management of Born-Digital Library Materials* (Dublin, OH: OCLC Research, 2015):
<http://www.oclc.org/content/dam/research/publications/2015/oclcresearch-archival-advantage-2015.pdf>

Ricky Erway, "Defining 'Born Digital,'" (OCLC, 2010):
<https://www.oclc.org/content/dam/research/activities/hiddencollections/borndigital.pdf>

Week 2 | February 3 – Digital Objects - Materiality

Matthew G. Kirschenbaum, "'An Old House with Many Rooms': The Textual Forensics of Mystery_House.dsk," in *Mechanisms: New Media and the Forensic Imagination* (Cambridge: MIT Press, 2008): 111-158

Trevor Owens, "Understanding Digital Objects," *The Theory and Craft of Digital Preservation* (Baltimore: Johns Hopkins University Press, 2018), 34-53

Kenneth Thibodeau, "Overview of Technological Approaches to Digital Preservation and Challenges in Coming Years," in *The State of Digital Preservation: An International Perspective* (CLIR, 2002): 4-31 <http://www.clir.org/pubs/reports/pub107/pub107.pdf>

Week 3 | February 10 – Digital Objects - Formats

Trevor Owens, "Managing Copies and Formats," *The Theory and Craft of Digital Preservation* (Baltimore: Johns Hopkins University Press, 2018), 103-128

Jonathan Sterne, "Format Theory," *MP3: The Meaning of a Format* (Durham: Duke University Press, 2012), 1-31

Kam Woods, Christopher A. Lee, Simson Garfinkel, "Extending Digital Repository Architectures to Support Disk Image Preservation and Access," *Proceedings of the*

11th Annual International ACM/IEEE Joint Conference on Digital Libraries (JCDL '11)
(New York: ACM, 2011): 57–66, <https://ils.unc.edu/callee/p57-woods.pdf>

Week 4 | February 17 – Text

Anne J. Gilliland, "Setting the Stage" in *Introduction to Metadata: Online Edition*, Version 3.0: http://www.getty.edu/research/publications/electronic_publications/intrometadata/setting.html

Margaret L. Hedstrom, Christopher A. Lee, Judith S. Olson, and Clifford A. Lampe, "'The Old Version Flickers More': Digital Preservation from the User's Perspective," *American Archivist* 69 (Spring/Summer 2006): 159-187

Rose Holley, "How Good Can It Get? Analysing and Improving OCR Accuracy in Large Scale Historic Newspaper Digitization Programs," *D-Lib Magazine* (March/April 2009): <http://www.dlib.org/dlib/march09/holley/03holley.html>

Week 5 | February 24 – Images

Paul Conway, "Modes of Seeing: Digitized Photographic Archives and the Experienced User," *American Archivist* 73, no. 4 (2010): 425-462

William J. Mitchell, "Electronic Tools" *The Reconfigured Eye: Visual Truth in the Post-Photographic Era* (Cambridge, MA: MIT Press, 1994): 59-86

Week 6 | March 2 – Audio

Paul Conway and Kelly Askew, "From International Shortwave to Digital Rebroadcast," *IASA Journal*, no. 48 (February 2018): <https://doi.org/10.35320/ij.v0i48.42>

IASA TC-04, *Guidelines on the Production and Preservation of Digital Audio Objects*, <https://www.iasa-web.org/tc04/audio-preservation>

Valerie Love, "Ka Mua, Ka Muri—Looking Back to Look Forward," *IASA Journal*, no. 48 (February 2018): <https://doi.org/10.35320/ij.v0i48.39>

Week 7 | March 9 – Moving Image

IASA TC-03, *The Safeguarding of the Audiovisual Heritage: Ethics, Principles and Preservation Strategy*, <https://www.iasa-web.org/tc03/ethics-principles-preservation-strategy>

Brecht Declercq and Irfan Zuberi, "Joining Forces in Audiovisual Digitisation, Digital Preservation and Access," *IASA Journal*, no. 49 (2018): <https://doi.org/10.35320/ij.v0i49.66>

Iain E. Richardson, "Video Compression Codecs," *IASA Journal*, no. 47 (2017): <https://doi.org/10.35320/ij.v0i47.51>

March 16 – Spring Break

Week 8 | March 23 – Selection and Appraisal

Mike Kestellec, "Practical Limits to the Scope of Digital Preservation," *Information Technology and Libraries* 31, no. 2 (June 2012): 63-71

Yunhyong Kim and Seamus Ross, "Closing the Loop: Assisting Archival Appraisal and Information Retrieval in One Sweep," *Proceedings of the American Society for Information Science and Technology* 50, no. 1 (2013): 1-10

Geof Huth, "Appraising Digital Records," in *Appraisal and Acquisition Strategies*, edited by Michael Shallcross and Christopher J. Prom (Chicago: SAA, 2016), 7-48

Week 9 | March 30 – Strategies and Workflows

Paul Conway, "Preservation in the Age of Google: Digitization, Digital Preservation, and Dilemmas," *Library Quarterly* 80, no. 1 (2010): 61-79

Matthew Kirschenbaum, Erika L. Farr, Kari M. Kraus, Naomi Nelson, Catherine Stollar Peters, Gabriela Redwine & Doug Reside, "Digital Materiality: Preserving Access to Computers as Complete Environments," *The Sixth International Conference on the Preservation of Digital Objects Proceedings: Mission Bay Conference Center* (San Francisco: 2009): 105-112, <https://escholarship.org/uc/item/7d3465vg>

Carey Stumm, "Preservation of Electronic Media in Libraries, Museum, and Archives," *The Moving Image* 4, No. 2 (Fall 2004): 38-63

Week 10 | April 6 – Audacity and Editing

Brandon Walsh, "Editing Audio with Audacity," *The Programming Historian*
<https://programminghistorian.org/en/lessons/editing-audio-with-audacity>

Week 11 | April 13 – Repositories

Devan Ray Donaldson and Paul Conway, "User Conceptions of Trustworthiness for Digital Archival Documents," *Journal of the Association for Information Science and Technology* 66, no. 12 (2015): 2427-2444

Brian Lavoie, *The Open Archival Information System (OAIS) Reference Model: Introductory Guide, 2nd Edition* (Digital Preservation Coalition, 2014),
<https://www.dpconline.org/docs/technology-watch-reports/1359-dpctw14-02/file>

Richard Wright, "The Significance of Storage in the 'Cost of Risk' of Digital Preservation," *The International Journal of Digital Curation* 3, no. 4:
<https://doi.org/10.2218/ijdc.v4i3.125>

Week 12 | April 20 – Access

Laura Carroll, Erika Farr, Peter Hornsby, and Ben Ranker, "A Comprehensive Approach to Born-Digital Archives," *Archivaria* 72 (Fall 2011): 61-92

Leslie McCartney, "The Evolution and Issues Encountered in Providing Meaningful and Useful Online Access to Oral History Recordings," *IASA Journal*, no. 47 (January 2018): <https://doi.org/10.35320/ij.v0i47.53>

Trevor Owens, "Enabling Multimodal Access and Use," *The Theory and Craft of Digital Preservation* (Baltimore: Johns Hopkins University Press, 2018), 159-186

Week 13 | April 27 – Ethics

IASA Special Publication No. 6, *Ethical Principles for Sound and Audiovisual Archives*,
<https://www.iasa-web.org/ethical-principles>

Claudy Op den Kamp, "Too Good To Be Forgotten," *IASA Journal*, no. 46 (August 2017):
<https://doi.org/10.35320/ij.v0i46.6>.

Ricardo L. Punzalan, "Understanding Virtual Reunification," *The Library Quarterly* 84, no. 3 (July 2014): 294-323

Week 14 | May 4 – Podcast Reflection and Preservation Plans

No required reading