LIS 665: Projects in Digital Archives
Spring 2010

Class Hours: Mondays 6:30 – 8:50p
Office Hours: Monday 5:00 – 6:00p, Wednesday 2:00-3:00p, and by appointment
Credits: 3
Prerequisites: LIS654 (Information Technologies), or by permission
Location: PMC 611

Bulletin Description:

This class is a combination of theoretical, practical and hands-on approaches to digital library creation. Topics will include metadata creation, image capture, archival storage and Web presentation. Students will learn about the theories behind the practices that they will implement, and will gain an understanding about the administrative issues associated with the successful implementation of a digitization project.

Detailed Description:

This course provides an opportunity for students to learn how to create a digital archive, and practice the implementation of such a digital archive with a partner library. Additionally, students have the opportunity to exercise their creativity in the design of a tool, program, or project that makes use of digital archives for educational or social purposes.

Course Objectives:

- Familiarize students with the current discourses in the area of digital archives, including theoretical and practical aspects.
- Introduce students to the digitization of audio and visual materials, including materials that are born digital.
- Learn about metadata and standards used in digital archive creation, as well as digital infrastructure.
- Anticipate managing digital archives in a time of technical change, including issues related in archiving the web, managing digital rights, and preserving digital content.

Course Schedule and Readings

1/25 – Introduction
- Overview of Syllabus and Projects
- Ice-breaker activity
- Assign weekly presenters of class readings
- Post a photo of yourself and fill-out your profile on Moodle

2/1 – Digital Archives in their Socio-technical Context

Subject to Change. Please refer to the LMS for updates: http://my.pratt.edu


Reflection Questions:

Cohen and Rosenzweig (2005) describe themselves as “techno-realists”:

This introduction briefly sketches seven qualities of digital media and networks that potentially allow us to do things better: capacity, accessibility, flexibility, diversity, manipulability, interactivity, and hypertextuality (or nonlinearity). We also talk about five dangers or hazards on the information superhighway: quality, durability, readability, passivity, and inaccessibility. This scorecard of possibilities and problems seems, on balance, to suggest a digital future worth pursuing. We thus align ourselves with neither the wild-eyed optimists nor the gloomy pessimists but rather with the camp known as “techno-realists” who seek, in the words of computer scientist and social theorist Phil Agre, to analyze “case by case the interactions between technology and institutions through which the action really unfolds.” 5 Doing digital history well entails being aware of the technology’s advantages and disadvantages, and how to maximize the former while minimizing the latter (pp. 2-3).

How would you describe your approach to new technologies (in a work setting or in a personal setting)? Are you more a luddite, cyber-enthusiast, techno-realist, or something else? Please explain.

2/8 – Doing Digital Archiving: The Practice of and its Challenges


Further Reading:


Reflection Questions:

Gilliland-Swetland (2000) discusses the use of the “archival perspective” in thinking through the movement of resources to the digital information environment. What is the “archival perspective,” and how is it useful (or not) in thinking about the digital information environment?

Brown and Duguid (2000) discuss the difference between information and knowledge and how these play
out in organizational contexts (particularly in corporate/business contexts, but can be applied to other contexts). Do you think their discussion complicates matters? For example, can archives as information sources really allow an individual to come to “know” that in which the information source speaks?

2/15 – Archiving Audio


Review Resources:
International Association of Sound and Audiovisual Archives: http://www.iasa-web.org/
FACET: http://www.dlib.indiana.edu/projects/sounddirections/facet/index.shtml
Oral History Association: http://www.oralhistory.org/
Step-by-Step Guide to Oral History: http://dohistory.org/on_your_own/toolkit/oralHistory.html#DOIT

Further Reading:


Reflection Questions:

When working with digital archives, it is common to ask the question, “how much space will we need to save all this material?” For the Dalton Oral History project, approximately how much space will we need just to store the audio (ignoring other data such as meta-data)? We know that we have 55 cassette tapes, and those could run as long as 60 or 90 minutes. However, how long would an interview ideally take? 20 minutes? 30 minutes? How could you find out without listening to every tape? Assume if we used 16-bit/44.1 kHz stereo audio and create uncompressed files, what is the low-end and the high-end of disk space we would need?

2/22 – Managing Digital Collections


**Review Resources:**


**Further Reading:**


**Reflection Questions:**

This week’s reading deals with creating and managing digital archives from two different perspectives: 1) the historian or individual perspective, as captured in the Cohen and Rosenzweig (2005) piece, and 2) the perspective of major libraries, universities and governments, captured in the OCLC and NISO piece. What are the difference between these two perspectives? Use the readings to illustrate your point. Do you have personal experience of working from within one of these perspectives, and if so, tell us about it?

**3/1 – Digital Archives in Teaching and Learning**


**Further Reading:**


**Reflection Questions:**

Teaching and learning is the cornerstone of our K-12 education system, and one of the most important components of our higher education system. Many archives and libraries are beginning to realize that one way to increase their visibility and impact is to better connect themselves with a teaching and learning mission. What are some strategies to do this, as described by Robyns (2001) and Malkmus (2008)?

The Piro piece discusses using artwork for teaching purposes. Do you have any teaching experience (either K-12 or higher education)? Have you ever used primary sources in your teaching? Do you think archives
should be investing more time and energy in teaching or learning, or are they better off doing other tasks, such as archival management, or working on the “move to digital”?

3/8 – Metadata and Standards


Review Resources:

Dublin Core Metadata Initiative: http://dublincore.org/documents
OAIster (search engine for OAI-harvested metadata): http://www.oaister.org
Text Encoding Initiative (TEI): http://www.tei-c.org/index.xml

Further Reading:


Reflection Questions:

Many different metadata standards and structuring devices exist for a variety of purposes. Why would you want to use for example, EAD, MODS, METS, Dublin Core, or MARC? Just so you don’t drive yourself crazy, it may not be clear in all cases and further research is usually necessary before implementing a metadata standard.

3/15 – Spring Break – No Class

3/22 - Digital Infrastructure: Introduction to Storage, Databases, Networks, and Cloud Computing

Storage:

Simply Storage: Platforms - http://www.youtube.com/watch?v=M-6IBHK4mjM
Simply Storage: RAID - http://www.youtube.com/watch?v=a7UXt3MceyI
Simply Storage: Security - http://www.youtube.com/watch?v=iHNUHGYq05g

Databases:

Networks:


Cloud Computing:


Review Resources:


Further Reading:


Reflection Questions:

This week’s readings and videos discuss the core infrastructure of digital archives: storage, databases and networks. Most (if not all) digital archives make extensive use of these components. In addition, this course section discussed cloud computing, which is an emerging method for acquiring these components (e.g., Library of Congress’ cloud computing pilot project). Of these four discussion topics, which do you feel the most comfortable with? For example, have you ever created or used a relational database (MySQL, Microsoft Access, Oracle)? If so, describe the project and how you used a relational database. How comfortable are you with your understanding of how the Internet works (or other networks such as Ethernet)? How comfortable are you with your understanding of data storage and some of the related concepts, such as RAID? Which component(s) would you like to discuss more fully in this class section?

3/29 – Digital Infrastructure: Content Management Systems

Project Proposals due.


**Review Resources:**

- Duraspace - [http://duraspace.org/](http://duraspace.org/)
- Omeka - [http://omeka.org/](http://omeka.org/)
- Parallel Archive - [http://www.parallelarchive.org/](http://www.parallelarchive.org/)

**Further Reading:**


**Reflection Questions:**

This week we will be discussing content management systems (CMS). CMS are used for storing and publishing digital content, which can be documents, video, audio, etc. Do you have any experience working with any of the CMS mentioned in the two articles. For example, have you used WordPress to create a blog?

**4/5 – Designing Digital Interfaces: Information Architecture, Usability, and Design Considerations**


**Further Reading:**


Reflection Questions:

This week we will be discussing user interfaces to digital archives. A variety of approaches are discussed in the readings with respect to designing a user interface, from a Web 2.0 approach (Cocciolo, 2010) to one specific to designing a historical website (Cohen & Rosenzweig, 2005). Discuss the readings and a user interface that you love OR hate. Why does it provoke such feelings of love or hate? How did your feelings about it change (or not) after using it for a period of time?

4/12 – Archiving Visual Media


Further Reading:


Reflection Questions:

What are some of the choices that a digitization project has to make? What affects the answers if you are scanning:

- a famous manuscript (e.g. the Declaration of Independence)
- large collections of manuscripts (e.g. the papers of some Senator)
- printed 18th or 19th century books
- recent printed material
- flat works of art (paintings, posters, ...).

Technical Question: A collection of 96,000 4 X 5-inch transparencies is scanned at 400 dpi, 24-bit color, and then losslessly compressed at a 1.3:1 ratio. Calculate the cost of hard disk storage (at .75 cents/GB) needed for this collection.

4/19 – Digital Preservation


Further Reading:
Reflection Questions:

This week’s readings discuss digital preservation. Day (2006) discusses the recent thinking on digital preservation, particularly as it applies to capturing and preserving web content. Netz and Noel (2007) chronicle the beginning of their extensive journey to preserve, digitize, and make available the Archimedes Palimpsest, a 2,200 year-old work of the Greek mathematician Archimedes (more information available here).

Have you had any digital preservation challenges in your past experiences (e.g., unable to access digital content) and what were they? How do you imagine that this kind of challenge might be amplified within a library or institutional context? Would you be interested in being a “Chief Digital Preservation Officer,” and if so, what would your agenda be (for some given institution of your choosing)?

4/26 - Web Archiving


Further Reading:


Reflection Question:

This week’s reading discusses web archiving. Masanès (2006) discusses why the web should be archived and preserved, and the primary methods for capturing the web. Giving the arguments he provides, do you
think libraries and archives should be archiving the web?

Technical question: During class session this past Monday, we created 4.74 GB of data (WAV and MP3 files) for the Dalton Oral History Project. These files need to be transmitted to our web server at the Pratt Brooklyn Campus. Which would take less time, transmitting these files over the network or walking them to the server? Assume that the network upload transmission speed has between found to be 150 Kbytes/sec. Also assume that we have physical access to the web server.

5/3 – Digital Rights Management


Further Reading:


Reflection Questions:

Besek (2003) outlines the copyright issues relevant to the creation of a digital archive. What are the issues? Given what she says about copyright, what do you think the implications are for an oral history digital archive (like the Dalton project)? Are there other digital rights issues other than copyright that we should be paying attention to?

5/10 – Design Project Presentations

Textbooks, Readings, and Materials

No textbook is required for this course. All readings are available online via Moodle.

Course Requirements

Students’ course grades will be determined by performance on the following activities:

1. Class Participation (20%)
2. Weekly Responses (30%) – 11 responses required over the course of the semester
3. Digital Archive Creation Project (25%)
4. Design Project (25%)
   4a. Proposal (2-5 pages) (5%) – due March 8
   4b. Design Document (5-10 pages) (15%) - due May 10, last day of class
   4c. Presentation (5%) – present on May 10, last day of class

Class Participation

Students are expected to be prepared and to contribute to class discussions each week with scholarly analyses and insights. In addition, each week one student or a team of two students will present their
understanding of the readings to the class. This is an opportunity to consolidate your (or your team’s) understanding on a topic, to present your perspective, to make novel connections to other domains, and to relate the readings to real-world experience. Presenters may use the essential questions posed (available on Moodle) to guide their presentations, or may choose their own direction in discussing the readings. Presenters should be prepared to make around a 10-15-minute presentation, and conclude with some questions or issues they would like to discuss more thoroughly.

The schedule of presenters will be decided on the first day of class.

**Weekly Responses**

Each week, students are expected to write at least two paragraphs that reflect on the readings. Reflections can be in response to the essential questions posted on Moodle. Students responses should be posed on Moodle by noon (at the latest) on the day of class (late responses will receive a reduced grade). Please do not bring in a hard-copy or email unless Moodle is unavailable. The purpose of these responses is to allow students the opportunity to reflect on the readings and share their reflections with the other members of the class. Students are encouraged to read the responses by their fellow classmates (this is, however, not a requirement). Based on interests, students may choose two weeks NOT to do a weekly response. This means by the end of the semester, each student should have posted 11 responses. However, participation is required for the week of February 22 since we will not be meeting face-to-face (please see Feb. 22 on the class schedule for more information).

Please note that the instructor will refer to these responses during class discussion and may ask students to further clarify or expand on their response.

**Digital Archive Creation Project**

The objective of the Projects in Digital Archives course is to provide students with the theoretical, practical and hands-on experience in digital library creation. In order to provide the most relevant and realistic learning experience for students, students will digitize an actual archival collection and develop the means of access to that collection through creating a web-presence. To accomplish this goal, we will partner with the Dalton School [http://www.dalton.org](http://www.dalton.org), a private K-12 educational institution in Manhattan, to develop a digital archive for one of its collections.

The Dalton School currently has a collection of oral histories about the school’s history and heritage that need digitization. This collection is comprised of 55 cassette tapes. The school does not currently have a digital archiving system, and thus part of our project in this class will be to select and deploy such a system where this collection can reside. Students will be responsible for researching and implementing the best solution. In order to digitize the materials, each student will be responsible for digitizing approximately 2-3 tapes. In addition to students digitizing 2-3 tapes, students will be placed in groups based on interests to carrying-out the project:

- **Project Management and Documentation**: Ensure the organization of the project and retain/write any relevant documentation.

- **Collection Development, Research and Meta-data**: Importing the digitized materials into the system, entering the meta-data, and providing any auxiliary materials (photos, etc.) that could augment the experience.

- **Technology**: Responsible for setting-up and installing the Content Management System, working with the design team to integrate the design.

- **Design**: Responsible for designing the look and feel of the site.
- Quality Assurance: Responsible for making sure the digitization, meta-data, design, technology and documentation are of high quality.

More information on this project will be made available as the course progresses.

**Design Project**

**Overview**

Each day, the web expands with new web pages, tweets, status updates, videos, files, links, among many other types of contributions. With the deluge of new information, a challenge associated with contributing any primary source materials to the web is making it meaningful to users. Your challenge is to design a project, tool, or program that makes an innovative use of digital archive for educational/learning purpose or a social purpose. In developing your project, consider the notion of “Archivist as Educator” (Robyns, 2001). More information on this project is to come as the course progresses.

The class will be divided into design groups with around four members. Time will be provided in class for groups to meet; however, meeting out of class time may be required. Each group will be expected to deliver a project proposal, a project design document, and a presentation on the last day of class. Details on these aspects are below:

**Proposal**

The Proposal should be 2-5 pages and outline the idea for your project. The proposal should be considered a less fully-fleshed-out version of the project design document (see below). The instructor will provide feedback on the proposal which you can use in further refining your project.

**Design Document**

The project design document should be 5-10 pages. This document should take the form of a traditional document (hence, it should not be a Powerpoint or in a presentation form). The design document should address:

a) What is the purpose of your project?
   1) Why do we need it?
   2) What materials will you use for this project?
   3) What educational or learning goals will motivate this effort, if any?
   4) What populations of users (if any) will be served?
   5) What type of community (if any) will be fostered by this effort?
   6) What role (if any) will librarians play in this project?
   7) What will be the size of this effort?
   8) What resources will be required?
   9) How will the project be assessed?

b) What are the features and functions of the project? Please be specific.

c) Implementation: What do you think would be involved to make this design a reality? Provide estimations.

d) What does the literature and research on digital archives offer in thinking about this project?

**Presentation**
Each group will get 20 minutes to present, and a 10 minute question and answer period. Each group should:

a) Make it fun and educational! Be creative! We have all been subject to ill-prepared or low-energy presentations- avoid it!

b) Discuss the goals, why your project is needed, and what makes your project innovative.

c) Provide a way of demonstrating your design to the class. These may include electronic illustrations (Powerpoint), an interactive simulation, or large paper/drawing presentations. You may also want to consider handouts for the class.

**Assessment and Evaluation**

1. All assignments must be completed in order to receive a passing grade in the course
2. Assignments must be turned in during class in hard copy (except for the weekly responses which should be completed on Moodle). Late assignments will receive a reduced grade
4. Late papers will receive a grade but no comments
5. Pratt policy: Students with extensive absences (three or more for any reason) will be required to drop the course.

**Pratt’s grading scale:**

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<thead>
<tr>
<th>Rating</th>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Superior work</td>
<td>A 4.0</td>
<td>(96-100)</td>
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<tr>
<td></td>
<td>A- 3.7</td>
<td>(90-95)</td>
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<tr>
<td>Very good work</td>
<td>B+ 3.3</td>
<td>(87-89)</td>
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<tr>
<td></td>
<td>B 3.0</td>
<td>(83-86)</td>
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<tr>
<td></td>
<td>B-2.7</td>
<td>(80-82)</td>
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<tr>
<td>Marginally satisfactory</td>
<td>C+ 2.3</td>
<td>(77-79)</td>
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<td></td>
<td>C 2.0</td>
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<tr>
<td>Failed</td>
<td>F 0.0</td>
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**Policies**

All Institute-wide policies are listed in the Bulletin under “Community Standards,” which include policies on attendance, academic integrity, plagiarism, computer, and network use. Students who require special accommodations for disabilities must obtain clearance from the Office of Disability Services at the beginning of the semester. They should contact Mai McDonald, Disability Services Coordinator, in the Office of the Vice President for Student Affairs, Main Building, Lower Level: 718-636-3711.