# Digital Literacy For Moving Image Archiving and Preservation
## CINE-GT 1808

**721 Broadway, Room 652**
Every **Monday, 7:00PM - 9:00PM** (2 hrs)
Fall 2018 Classes:
- September 10, 17, 24
- October 1, 9 (Tue), 15, 22, 29
- November 5, 12, 19, 26
- December 3, 10

## Instructor

**Kathryn Gronsbell**
kgronsbell@nyu.edu
@Kathryn on Slack
**Office hours:** By Appointment (in-person at 721 Broadway or online video chat)

## Course Description

This class will prepare incoming first year MIAP students for working with digital technologies throughout their academic and professional careers. The course will focus on web applications, databases, and data management tools — technologies that play a fundamental role in moving image collections management today. The course will emphasize digital literacy so that students will be equipped to make informed technology decisions in the future. By introducing these topics in their first semester, this course provides students with core competencies that will be utilized in subsequent classes in the MIAP program.

## Learning Objectives

Upon completion of the course, students will demonstrate their technical competency by being able to:
- **explain** how technology is created, deployed, adopted, used, and maintained. Students will be able to **describe** the power dynamics that enable implicit and explicit biases that determine how information is preserved and made accessible. They will be able to **summarize** the ethical considerations of both technologists and users;
- **summarize** fundamental technology concepts and elements, including but not limited to: operating systems, file systems, storage, application layers, networks and the Web, data structures, and the role of programming and computing languages;
- **participate** in collaborative, open software and/or documentation practices and communities;
- **evaluate and describe** technical challenges by communicating clearly and effectively, improving their ability to collaborate with other technologists. Students will learn how to express themselves using technical and non-technical writing so they are empowered to work with those in adjacent computing or digital fields, vendors, and colleagues; and
- **compare** priorities of moving image archiving and preservation to traditional notions of information technology practices, and **identify** how these concepts intersect and overlap.

## Attendance and Punctuality

Attendance at all classes is expected, as is on-time arrival. Please be prepared to begin at 7:00pm. Tardiness and unexpected absences will impact your grade - see the Assignments and Grading section for more details.

Most classes' activity instructions are provided in the document for that week - so you may complete the activity independently if you miss the opportunity to participate in class. You are responsible for the content of the classes you miss - you may schedule a visit to Office Hours to discuss any questions. If an assignment is due the week a student is absent or requesting and absence, it should be completed by the deadline.

## Laptop

Students are required to bring their own laptops to class each week. Either Windows or Mac are acceptable so long as your laptop meets the following minimum requirements:

*Mac*
OS 10.6.8 or later
Intel Processor
At least 2 GB RAM
At least 30 GB available disk space

*Windows*
XP or later
Preferably 64 bit
At least 2 GB RAM
At least 30 GB available disk space

If you do not have access to a laptop, or do not have one that meets these minimum requirements, you may be loaned one for use during class. Please email Kathryn and Blanche.

## Communication

We will use the collaboration tool **Slack for communication about class topics, activities, and schedule changes**. This semester's URL is: **18f-digitalliteracy.slack.com**

Everyone will receive an invitation to the class Slack account, and should install the Desktop application on their computers or the mobile application. There will be different channels set up within Slack for each topic. Help each other with troubleshooting and getting comfortable with this platform - this will factor into your participation grade. Ask and answer questions about using Slack in the **#helpme-slack** channel.

## Assignments and Grading

Each class will have one or more learning objectives and accompanying activities. Activities may be group or individual, and may be completed during class or as homework. Students will be required to turn in or otherwise demonstrate the results of weekly assignments before the start of the following class meeting, regardless of whether the activity was completed in class or at home as homework. Unless specified otherwise, students are **encouraged to collaborate and troubleshoot assignments together**.

There are 4 areas that determine your final grade. **100 total points** are possible and are described below.

| Area | Area description | Total possible points |
|---|---|---|
| **Participation**<br>● **In class**<br>● **Slack** | *In class*: full points possible when student arrives on time, takes part in classroom activities to the best of their ability, comes to class having done the readings, ready to discuss session topic and with material installed or otherwise ready to use. Students' goal should be active listening where comprehension is demonstrated through positive, constructive contributions to their classmate's learning experience, in addition to their own.<br><br>*Slack*: full points possible when student completes assigned Slack instructions and engages in discussion with classmates using channels available by asking or answering questions, providing support/tips/resources. | In class: 20 points<br><br>Slack: 20 points<br><br>Total: **40 points** |
| **Completion of assigned work** | In class and homework assignments should be completed and submitted as described in the syllabus. | **25 points** |
| **Work-in-progress presentation of final project** | Brief summary of completed and proposed work on final project, presented to the class. Students will receive peer and instructor recommendations, and contribute feedback to their classmates. | **5 points** |
| **Final project report** | The final project will be the identification of a need in the digital archiving and preservation community, creating documentation around that need, and initial steps to address it. Required elements, guidelines, and examples are available here. | **30 points** |

**On-time completion of assigned exercises is expected -** tasks are designed to help students progressively build on the skill set they develop each week. If you are unable to complete an assignment on time, please email an explanation and expected submission date at least 48 hours before the deadline. Late submissions will affect your grade by **1 point penalty per day late.** Lateness for the final project will result in **3 point penalty per day late**.

## Grading Rubric

| | |
|---|---|
| 94 – 100 A | 63 – 68 C |
| 88 – 93 A – | 57 – 62 C- |
| 84 – 87 B+ | 51 – 56 D+ |
| 80 – 83 B | 45 – 50 D |
| 75 – 79 B- | >44 F |
| 69 – 74 C+ | |

## Final project

The **final project** will be the identification of a need in or related to the digital archiving and preservation community, creating documentation around that need, and initial steps to address it. Reminders and activities related to the **final project will appear in bolded purple text** in Course Schedule. Required elements are due:
- **November 5**: Rough idea of need
- **November 12**: Defined need identified in "user story" format, as in-class exercise
- **November 19**: Brief summary of work completed towards final project, presented to the class with proposed work described for feedback. Slides or other presentation format acceptable.
- **December 10 (Last class)**:
  - Written project charter including final "user story", research summary, objectives, and methodology (2-4 pgs)
  - Annotated Bibliography/works referenced list
  - Submission of a minimum of one of the following to provide evidence of your effort to address the need:
    - Github: new repository, pull request or issue submission on existing project addressing identified need
    - Submission to publicly-accessible review or feedback document, or written confirmation of submitted feedback
    - Detailed evidence of in-person contributions and participation

# Course Texts and Resources

There is not a required textbook for this course. Most assigned readings are available online (free) or will be provided by the instructor and should be read before the class they are assigned for. The course will also require the use of free or pre-licensed software, which students may be required to download in order to complete in-class and homework assignments. Please come prepared with software downloaded and installed in advance of the class, when instructed. We will use NYU's subscription to Lynda.com for online tutorials through nyu.edu/lynda as well as other freely-available, online training.

# COURSE SCHEDULE

## Class 0: September 10

Topics:
- Welcome: Introductions, syllabus and course expectations, **final project overview**
- Why does a moving image archivist need to understand digital technologies and practices?
- We have 14 sessions - why did the class numbers start with 0 instead of 1?

Activities:
- Accessing and using the Slack web application for course collaboration
- Discussion: Introduction to ethics and power structures in technology, with a focus on information management
  - Exercise: "What's your mother's maiden name?"
  - Group review of *Data Detox - Day 0* - https://datadetox.myshadow.org/en/detox/day0
- Voting information review
  - If you're a NY resident, check your voting status at https://voterlookup.elections.ny.gov and your voting location at https://nyc.pollsitelocator.com/search.
  - Reminder: if you are a registered with a party in NY, you can vote in the **New York State Primary on Thursday, September 13.**

Complete before Class 1:
1. Complete **Days 1-8** of Data Detox. Take notes on your experience and submit a 1-pg summary of your expectations, experience, and impact of the Data Detox exercise by **Sept 20**.
2. **Install the Slack application** on your laptop and/or mobile device.
   a. **Ask or answer 1 question** in #helpme-slack, or share a helpful tip in one of the other channels, or create a channel to start a discussion on new topic.
   b. Send a **direct message using Slack to Kathryn** to confirm you installed Slack on your phone, laptop, or both.
3. TBA readings on:
   a. Tech is not neutral
   b. Museums are not neutral
   c. Archives are not neutral
   d. Archival silences, and information systems as power systems

## Class 1: September 17

Topic: Digital Ecosystems, Part A
- Introduction to digital ecosystems and components
  - What is "digital"? What is "analog"?
  - Files, metadata, data structures and anatomy, file storage and systems
  - The quickest introduction to digital A/V you'll ever see

Complete before Class 2:
1. TBA readings
2. Submit a 1-pg summary of your expectations, experience, and impact of the Data Detox exercise by **Sept 21**.

## Class 2: September 24

Topic: Data Management
- How is data organized and stored? Formatted? Encoded?
- What are data storage options, and what are the advantages/drawbacks of different approaches?
- How does data management (including fixity, reproducibility, sustainability) relate to preservation and archiving?
- What is Personally Identifiable Information (PII) or sensitive data?

Activities
- Introduction to common data storage formats/serializations and uses (CSV, RDBMS/SQL, XML, JSON, RDF, etc.)
- Exploring relational database structures vs. flat data management
- Best practices for data creation and maintenance in spreadsheets

Complete before Class 3:
- Watch all of [Relational Database Fundamentals](#) by David Wilbert (Lynda.com Tutorial, 3 hrs).
- Submit a takeaway or question (with research, if you have it) to Slack channel #databases regarding the Relational Database fundamentals.

## Class 3: October 1

Topic: Digital Ecosystems, Part B
- Introduction to the Open Systems Interconnection (OSI) networking reference model
- What is a network? What are clients/servers? How is data transferred? What are protocols?
- Standards, documentation - where to find, how to read - and why to read.
- What is the web, the Internet, the IoT (Internet of Things)?
- Understanding the cloud and impact on preservation strategies
- How data is structured for web presentation
- Languages and applications on the web, APIs

Activities:
- What is my IP address?
- Examine and manipulate web pages in browser
- Transferring data using [tbd] or accessibility testing of existing sites

Complete before Class 4:
- TBA readings

## Class 4: <u>Tuesday</u>, October 9

Topic: Talking to the Computer, Part A
- How to tell the computer what you want it to do for you: Command Line Interface (CLI) vs Graphic User Interface (GUI), and how you benefit from knowing how to use both.

Activities:
- Use the CLI for basic file/system navigation and file manipulation
- **Final project** - elements review and start to think about questions you have...

Complete before Class 5:
- TBA readings
- Research how to export/print/output your terminal history (for this class only). Submit the output in .txt format.
- Install [TBA tool] on your laptop. Instructions will be provided.

## Class 5: October 15*

**Kathryn will be away at the [Digital Library Federation](#) Forum and [National Digital Stewardship Alliance's](#) Digital Preservation conference. Guest Instructor [TBA] will be leading the class.**

Topic: Talking to the Computer, Part B
- Common programming languages used in archival and preservation environments
- Utilities and tools for file-based media archival and preservation activities

Activities:
- Revisit commands from Class 4 and run tools from the CLI
- Use CLI and GUI to examine media files and their characteristics

Complete before Class 6:
- Complete activities provided by the Guest Instructor. Ask and answer questions in Slack in the #cli channel to work through any challenges together.

## Class 6: October 22

Topic: Digital Archives + Archival Concepts in Digital Spaces
**Guest Instructor [TBA] will visit the class and discuss Digital Archives.**
- Best practices of sponsorship, stewardship, training, and leadership
- Intersection of preservation concerns with across organizations and teams, and digital considerations in contrast and in collaboration with physical archiving

Complete before Class 7:
- Identify a community or professional organization related to technology, coding, documentation, machines, data, infrastructure and join their community. If this is in the form of a listserv, IRC,

Slack or other group, submit the confirmation after you've joined. If it is an in-person or other type of group, submit whatever is appropriate to demonstrate your participation/involvement.
- TBA readings on Codes of Conduct


## Class 7: October 29

Topic: Digital Repositories and Management Systems
- Introduction to Digital Repositories and Media/Asset/Content/Collection Management Systems
- Characteristics of above, and opportunities to support digital preservation efforts

Activities:
- Examine, create, edit sample collection data

Complete before Class 8:
- 1-page summary about the potential benefits or considerations for any system listed in the Collection Management System Collection (background blog from Ashley Blewer here). Submit 1 question about your chosen system or your research process to the **#managementsystems** Slack channel.
- TBA readings of sample RFPs
- **Rough idea/topic/question for final project**


## Class 8: November 5

Topic: Project Management - Communicating and Documenting Technology Needs Effectively
- Project management and tech-specific strategies, including agile and waterfall
- Communication strategies for collaborative technical project development
- Using interviews, use cases, requirements to draft Requests for Proposals (RFPs)

Activities:
- Best practices for identifying, documenting issues/errors/"bugs"
- Using final project topic, **generate draft user story for collaborative review**
- Voting reminder:
  - **General Election** is tomorrow, **November 6**! You can vote if you are or are not registered with a party. If you're a NY resident, check your voting status at https://voterlookup.elections.ny.gov and your voting location at https://nyc.pollsitelocator.com/search.

Complete before Class 9:
- Research an aspect of your **final project user story** on StackOverflow or another community-based resource where it is discussed (wikis, listservs, forums, etc). Prepare your **brief** explanation to discuss with the class. Keep a list of links to specific posts to demonstrate your responses to the following prompts - no slides or other presentation material. Answer:
  - What aspect of your final project topic did you research?

- ○ What types of question posts were most helpful/useful to you in terms of matching your question? How were they worded? Did they include examples, code, files? What other details were helpful? What was not helpful?
- ○ What types of responses were the most helpful/useful to you? What kind of information did you benefit the most from? What aspects of the responses could have been improved for clarity from your perspective, and in what way would you recommend that?

## Class 9: November 12

Topic: Maintenance - Data and Documentation Management
- Data assessment: integrity, quality, portability and extendability
- Technical writing and documentation maintenance
- How technical maintenance aligns with preservation or emulation practices (e.g., software preservation)

Activities:
- Roundtable:
  - ○ Identify characteristics of successful technical communication based on researching your final project idea
- Practice technical writing skill set based on roundtable outcomes

Complete before Class 10:
- TBA readings
- **Prepare to present "work in progress" on final project topic.** Slide/resource submission information TBA.

## Class 10: November 19

- **Present and discuss "work in progress" final project topic (+ snacks)**

Complete before Class 11:
- Create a free github.com account

## Class 11: November 26

Topic: Tech, Together
- How code is developed, managed and distributed (versioning, releases)
- Free/libre, open source, commercial, proprietary - software, documentation, standards
- Introduction to git and GitHub

Activities:

- Github web UI: create a repository with a README.md and license.
- Github via CLI: clone an existing repository to local. Make a change and commit to the repository.
- Make a pull request on your partner's repository.
- Any **final project** questions?

Complete before Class 12:
- Add your GitHub username in **#github** Slack channel.
- At AMIA, take notes on your observation or participation in discussions around ethics and power structures in technology. Bring these observations to class on Dec 3. **What AMIA sessions, events, themes relate to your final project?** Safe travels & enjoy the conference!

## Class 12: December 3

Topic: Revisiting ethics and power structures in technology

Activities:
- Review AMIA 2018 program:
    - What topics, discussions, meetings, or projects intersected with this topic?
    - What implicit or explicit biases were addressed during conference?
    - What considerations were not addressed?
        - Create draft list of desired topics and questions for future emphasis to submit to AMIA Education Committee on behalf of class.

Complete before Class 13:
- TBA Readings
- **Continue working on your final project report**

## Class 13: December 10

Topic: Retrospective Practice and Thanks

Activities:
- **\*Final project report DUE\***
- Review concept of a retrospective
    - Course retrospective (styled as a sprint retrospective)
- Discussion:
    - Based on experiences and resources in this course, how has your understanding of technology and its role in our profession changed?
    - What actions or inaction impact our work?
    - What is the most important thing you'll take into your work in MIAP, at your internship, elsewhere?
- Thank you!

## Policies

### Digital Archive of Student Work

All student projects are to be collected and made accessible on the Student Work page of the [MIAP website](). Certain types of assignments will be password-protected and made accessible only to MIAP students and faculty. Students are required to submit all of their work for each class to their professor in a digital format (.pdf is encouraged for cross-platform compatibility) via email or other available digital medium.

As a primary goal of NYU's MIAP Program is to be useful to the archival field, **the default status of student works will be public** (with the exception of internship reports and thesis proposals). Students, in consultation with their instructor, can make a case for why a particular assignment should be restricted to internal use. Proprietary information, confidential information, or copyright issues may lead to this decision, but not a general unwillingness to make work public.

### Formatting

Please use Chicago Style citations when possible. Provide the most persistent version of a link, opting for a permalink, URI, or persistent identifier if possible. Always credit the source and be mindful of the licenses (e.g., Creative Commons) under which information is made available.

When students submit digital files of their work, the file names should conform to MIAP's standard format, with f used to indicate fall semester and s used to indicate spring semester: YYsemester_course number_author's last name_a[assignment#].file extension. Here is an example of a student with the surname Costa, submitting the first assignment in the fall 2018 course CINE-GT 1808: 18f_1808_Costa_a1.pdf.

For multiple authors, the two initials of each author will be used, separated from each other by underscores. An underscore and the assignment number will follow this. Assignment numbers are determined by the order in which the assignments are given. They begin with an "a," followed by a number between one and ten. For assignments with multiple files, a letter can be added after the number. Thus, one could have "a1b," meaning that this is the second of multiple files from one student for one particular assignment. In the case of a restricted file that should not be made public, the student should add an "_x" to the end of the file name indicating the file's restricted status: 18f_1808_Costa_a1_x.pdf. Otherwise, permission shall be implicitly granted for the student's work to be posted on the MIAP website.

### Tisch Policy on Academic Integrity

The core of the educational experience at the Tisch School of the Arts is the creation of original work by students for the critical review of faculty members.  Any attempt to evade that essential transaction through plagiarism or cheating is educationally self-defeating and a grave violation of Tisch's community standards. Plagiarism is presenting someone else's original work as if it were your own; cheating is an attempt to deceive a faculty member into believing that your mastery of a subject or discipline is greater than it really is. Penalties for violations of Tisch's Academic Integrity Policy may

range from being required to redo an assignment to dismissal from the School. For more information on the policy--including academic integrity resources, investigation procedures, and penalties--please refer to the Policies and Procedures Handbook on the website of the Tisch Office of Student Affairs.

### Health and Wellness Resources

Your health and safety are a priority at NYU.  If you experience any health or mental health issues during this course, we encourage you to utilize the support services of the 24/7 NYU Wellness Exchange 212-443-9999.  Also, all students who may require an academic accommodation due to a qualified disability, physical or mental, please register with the Moses Center 212-998-4980. Please let your instructor know if you need help connecting to these resources. Students may also contact MIAP Director Juana Suárez (juana@nyu.edu) and/or Associate Director Scott Statland (scott.statland@nyu.edu) for help connecting to resources.

### Sexual Misconduct, Relationship Violence, and Stalking Policy & Reporting Procedures

NYU seeks to maintain a safe learning, living, and working environment. To that end, sexual misconduct, including sexual or gender-based harassment, sexual assault, and sexual exploitation, are prohibited. Relationship violence, stalking, and retaliation against an individual for making a good faith report of sexual misconduct are also prohibited. These prohibited forms of conduct are emotionally and physically traumatic and a violation of one's rights. They are unlawful, undermine the character and purpose of NYU, and will not be tolerated. A student or employee determined by NYU to have committed an act of prohibited conduct is subject to disciplinary action, up to and including separation from NYU. Students are encouraged to consult the online Sexual Misconduct, Relationship Violence, and Stalking Resource Guide for Students for detailed information about on-campus and community support services, resources, and reporting procedures. Students are also welcome to report any concerns to MIAP Director Juana Suárez (juana@nyu.edu) and/or Associate Director Scott Statland (scott.statland@nyu.edu).

### Non-Discrimination and Anti-Harassment Policy & Reporting Procedures

NYU is committed to equal treatment and opportunity for its students and to maintaining an environment that is free of bias, prejudice, discrimination, and harassment. Prohibited discrimination includes adverse treatment of any student based on race, gender and/or gender identity or expression, color, religion, age, national origin, ethnicity, disability, veteran or military status, sexual orientation, marital status, or citizenship status, rather than on the basis of his/her individual merit. Prohibited harassment is unwelcome verbal or physical conduct based on race, gender and/or gender identity or expression, color, religion, age, national origin, ethnicity, disability, veteran or military status, sexual orientation, marital status, or citizenship status. Prohibited discrimination and harassment undermine the character and purpose of NYU and may violate the law. They will not be tolerated. NYU strongly encourages members of the University Community who have been victims of prohibited discrimination or prohibited harassment to report the conduct. MIAP students may make such reports to MIAP Director Juana Suárez (juana@nyu.edu) and/or Associate Director Scott Statland (scott.statland@nyu.edu), or directly to Marc Wais, Senior Vice President for Student Affairs. Students should refer to the University's Non-Discrimination and Anti-Harassment Policy and Complaint Procedures for detailed information about on-campus and community support services, resources, and reporting procedures.

The Family Educational Rights and Privacy Act of 1974 (FERPA) was enacted to protect the privacy of students' education records, to establish the rights of students to inspect and review their education records, and to provide students with an opportunity to have inaccurate or misleading information in their education records corrected. In general, personally identifiable information from a student's education records, including grades, may not be shared without a student's written consent. However, such consent is not needed for disclosure of such information between school officials with legitimate educational interests, which includes any University employee acting within the scope of their University employment. See here for full policy guidelines.

## NYU Academic Support Services

NYU offers a wide range of academic support services to help students with research, writing, study skills, learning disability accommodation, and more. Here is a brief summary:

**NYU Libraries**
Main Site: library.nyu.edu; Ask A Librarian: library.nyu.edu/ask
70 Washington Square S, New York, NY 10012
Staff at NYU Libraries has prepared a guide covering services and resources of particular relevance to graduate students. These include research services and guides by topic area, subject specialists, library classes, individual consultations, data services, and more. There's also a range of study spaces, collaborative work spaces, and media rooms at Bobst, the library's main branch.

**The Writing Center**
nyu.mywconline.com
411 Lafayette, 4th Floor, 212-998-8860, writingcenter@nyu.edu
The Writing Center is open to all NYU students. There, students can meet with a faculty writing consultant or a senior peer tutor at any stage of the writing process, about any piece of writing (except exams). Appointments can be scheduled online. Students for whom English is a second language can get additional help with their writing through a monthly workshop series scheduled by the Writing Center (cas.nyu.edu/content/nyu-as/cas/ewp/writing-resources/rise-workshops.html).

**The University Learning Center (ULC)**
nyu.edu/ulc; Academic Resource Center (18 Washington Pl, 212-998-8085) or University Hall (110 East 14th St, 212-998-9047)
Peer Writing Support: All students may request peer support on their writing during drop-in tutoring hours for "Writing the Essay / General Writing" at the University Learning Center (ULC), which has two locations noted above. Students for whom English is a second language may wish to utilize drop-in tutoring geared towards international student writers (see schedule for "International Writing Workshop").
Academic Skills Workshops: The ULC's Lunchtime Learning Series: Academic Skills Workshops focus on building general skills to help students succeed at NYU. Skills covered can help with work in a variety of courses. Workshops are kept small and discuss topics include proofreading, close reading to develop a thesis, study strategies, and more. All Lunchtime Learning Series workshops are run by Peer Academic Coaches.

**<u>Moses Center for Students with Disabilities</u>**

nyu.edu/students/communities-and-groups/students-with-disabilities.html

726 Broadway, 3rd Floor, 212-998-4980, mosescsd@nyu.edu

All students who may require an academic accommodation due to a qualified disability, physical or mental, are encouraged to register with the Moses Center. The Moses Center's mission is to facilitate equal access to programs and services for students with disabilities and to foster independent decision making skills necessary for personal and academic success. The Moses Center determines qualified disability status and assists students in obtaining appropriate accommodations and services. To obtain a reasonable accommodation, students must register with the Moses Center (visit the Moses Center website for instructions).