INLS 756: Data Curation and Management
Spring 2018

The Instructor.

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Class Listserv: inls756-sp18@sakai.unc.edu

Course Timeline.

First Week of Classes: January 12, 2018.
Last Week of Classes: April 23, 2018.
Final Exam/Project Due: April 30, 2018

Course Description.

This class explores the full range of data curation lifecycle activities, from the design of good data through content creator management, metadata creation, ingest into a repository, repository management, access policies and implementation, to data reuse. Data management plans for various funders such as NSF and NEH will be explored.¹

Objectives and Learning Outcomes.

By the end of the course, the student should be able to:

• Grasp the urgency of and need for long-term data curation in public and private venues
• Define data and identify their roles in organizational, technological, legal, cultural, and business contexts
• Understand both theoretical and practical issues in data curation from a broad range of perspectives
• Describe central data curation concepts, terms, tools, and technologies
• Be familiar with the current state of knowledge in the field and its key research issues as well as past trends and emerging priorities
• Understand the data curation lifecycle and identify the activities associated with each stage and their social, legal, ethical, and policy implications
• Understand the archival continuum model and how it relates to data curation.

¹ Thanks to Dr. Christine L. Borgman for many ideas for this syllabus along with SILS Ph.D. student, Thu-Mai Christian, and SILS Alumni, Alex Poole and Ayoung Yoon.
• Understand the variety of data types generated and used by various disciplines, sub-disciplines, and research communities
• Understand how data curation relates to and has changed scholarship and research
• Examine the challenges associated with data sharing for collaboration and re-use
• Discuss roles for libraries and archives in data curation
• Understand the role of archival principles in data curation
• Delineate roles and responsibilities for data curators
• Understand the importance of planning to successful data curation
• Discuss public policy for data (scientific, governmental, and scholarly)
• Identify optimal data curation standards and best practices
• Understand crucial issues associated with storage, backup, and security of data
• Engage with challenges surrounding sustainability, auditing, risk management, trust, and costing
• Become familiar with current data curation education efforts

Office Hours.

I will be in my physical office after INLS 755, Friday 1:00-2:00. For Chapel Hill students, please drop by at this time, or send me an e-mail message for other scheduling opportunities. If I am not available when you try to see me, please send an email, which is my primary means of communication. Also, feel free to call me at home in the evening before 9:00 PM. I will also poll everyone to set up a weekly virtual office hour.

Email.

Please check the course listserv on a regular basis if not daily. This will be our primary means of communication. The address is: inls756-sp18@sakai.unc.edu. If you have a question of general interest to the class such as “What do you mean by X in assignment Y?” please send this to the class list and I will answer it so that everyone can benefit.

How We Will Conduct “Class.”

While online courses afford great convenience, they also demand extra effort from both instructors and students. Because there is no face time for lectures, discussions, group work, or other activities, all this must take place through the course site on Sakai. This involves extensive writing and creation of slides, videos, and other media we will use to communicate our ideas and questions. The syllabus, assignments, and many of the readings (unless available online) will be posted on Sakai. I will provide slides and some brief “lectures” on important points but much of the work of the course will take place in the forums via discussion of the readings, videos, and slides. There is also a MOOC posted on Coursera designed for this class.

Class Participation (Forum Posts) 15% of Grade.

• You are expected to participate in the class forum every week. Posts are due on Tuesday at 11:55 PM of each week to allow your classmates and me to read all of the posts before the end of the week period.
• Please respond to each question/scenario I have posted by replying to them.
• Posts may address the readings, lectures, and the other materials that are part of that week’s assignments as well as any other source relevant to a given week’s content.
• Grades will be assigned based on the quality of the posts not the length of each post.
• Posts will be assessed based on the following criteria:
  • Relevance of the post to the question/conversation, i.e. the degree to which a post advances the discussion (hint – this is easier if you post early before others have made the most obvious points!)
  • Depth of understanding of the material, i.e. the level of preparation shown in the post.
  • Level of insight displayed by the post - does the post reflect the nuances of the question or situation posed?
  • Inclusion of relevant materials outside the assigned readings.

The purpose of the forum discussions is to help you to think critically about issues and challenges related to digital curation and management, and to address ways that the literature may affect practice. It is helpful, when preparing each week’s work, to consider how that session’s particular theme and readings may apply to your area of professional interest. You are also encouraged to share current news and events you find informative to issues of data curation through the class listserv.

Please work to stay on top of the forum posts. This is the primary way we will share with each other and act as a class during the semester. Be prepared to give your most thoughtful comments and learn from others’ posts.

### Assignments & Evaluation.

<table>
<thead>
<tr>
<th>Assignment</th>
<th>% of Grade</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forum Posts (Analysis of Readings – students will be assigned various weeks to lead discussions)</td>
<td>15%</td>
<td>On-going, Monday of each week</td>
</tr>
<tr>
<td>Curation Profile Progress Report (Peer Review)</td>
<td>5%</td>
<td>Feb. 15</td>
</tr>
<tr>
<td>Data Curation Approach for Your Personal Digital Materials</td>
<td>15%</td>
<td>Feb. 22</td>
</tr>
<tr>
<td>Data Confidence Exercise</td>
<td>10%</td>
<td>Mar. 1</td>
</tr>
<tr>
<td>Workflow Tool Analysis</td>
<td>10%</td>
<td>Mar. 8</td>
</tr>
<tr>
<td>Critique Data Management Plan</td>
<td>10%</td>
<td>Mar. 22</td>
</tr>
<tr>
<td>Curation Profile Presentation (Video to Class)</td>
<td>10%</td>
<td>April 12</td>
</tr>
<tr>
<td>Feedback to Classmates on Their DCPs</td>
<td></td>
<td>April 19</td>
</tr>
<tr>
<td>Curation Profile Written Report (Post to Class)</td>
<td>25%</td>
<td>Monday, April 30, by 4:00 PM</td>
</tr>
</tbody>
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Graduate Grading Scale.

- H (95-100): "Clear excellence", above and beyond what is required
- P (80-94): Entirely satisfactory; SILS recognizes subtle levels of "satisfactory" since most grades tend to cluster here:
- L (70-79): Low passing
- F (< 70): Failed
- IN: Work incomplete (only given under extreme circumstances, such as serious illness)

Honor Code & Class Conduct.

Honor Code:
The University of North Carolina at Chapel Hill has had a student-administered honor system and judicial system for over 100 years. The system is the responsibility of students and is regulated and governed by them, but faculty share the responsibility. If you have questions about your responsibility under the honor code, please bring them to your instructor or consult with the office of the Dean of Students or the Instrument of Student Judicial Governance. This document, adopted by the Chancellor, the Faculty Council, and the Student Congress, contains all policies and procedures pertaining to the student honor system. **Your full participation and observance of the honor code is expected.**

This class follows the UNC Honor System. Information on the Honor Code can be found at: [http://honor.unc.edu/](http://honor.unc.edu/). Please read through The Honor System's Module at: [http://studentconduct.unc.edu/students/honor-system-module](http://studentconduct.unc.edu/students/honor-system-module) to become familiar with the UNC Honor Code and to understand the rights and responsibilities defined therein.

The Instrument of Student Judicial Governance, ([http://instrument.unc.edu/](http://instrument.unc.edu/)) which contains the provisions of the Honor Code, states that students have four general responsibilities under the Code:

1. Obey and support the enforcement of the Honor Code;
2. Refrain from lying, cheating, or stealing;
3. Conduct themselves so as not to impair significantly the welfare or the educational opportunities of others in the University community; and
4. Refrain from conduct that impairs or may impair the capacity of University and associated personnel to perform their duties, manage resources, protect the safety and welfare of members of the University community, and maintain the integrity of the University.

The Instrument ([http://instrument.unc.edu/](http://instrument.unc.edu/)) prohibits giving or receiving unauthorized aid on examinations or in the completion of assignments. The **Honor Code defines plagiarism as "deliberate or reckless representation of another's words, thoughts, or ideas as one's own without attribution in connection with submission of academic work, whether graded or otherwise." Whenever you use the words or ideas of others, this should be properly quoted and cited.** You should adopt a style guide – e.g., American Psychological Association, Chicago Manual of Style, MLA, or Turabian – and use it consistently. (I do not care which one you select!) Students who are discovered
attempting to take credit for work performed by others will be referred to the Honor Court for resolution.

Please include the following pledge on all submitted work: “On my honor, I have neither given nor received unauthorized aid on this assignment.”

Class Policies:

- Be prepared for each week’s lessons by completing the assigned reading and exercises, enabling you to ask questions and participate in class discussion online.
- Be an active and positive participant in online discussions, characterized as:
  - Having a clear command of the readings for the week;
  - Sharing analyses and opinions based on the readings;
  - Respecting other students’ views and opinions; and
  - Freely agreeing and disagreeing with others when warranted.
- Follow the netiquette guidelines below.
- Please note: An intellectual exchange of ideas is the cornerstone of education, but any criticism should be limited to an idea and not the person specifically.
- Turn in assignments by the due date unless you make previous arrangements with the instructor. Unexcused late assignments are unfair to your classmates.

Penalty for Late Assignments.

I expect assignments to be passed in on time. This is important for at least two reasons: 1) the need to meet deadlines is a reality of professional life, and 2) giving some people more time for an assignment than others in the class is not equitable. However, life happens to all of us at one time or another. If you cannot meet an assignment deadline please tell me why PRIOR to the due date. I will negotiate a new deadline with anyone who has a valid reason for needing this (i.e., NOT “I just didn’t get it done.”). Otherwise, late assignments will drop 3 points for each day late.

Online Etiquette Guidelines.

http://www.albion.com/netiquette/
http://www.indiana.edu/~icy/netiquette.html
http://www.brighthub.com/education/online-learning/articles/26946.aspx

Textbook.

Gillian Oliver & Ross Harvey, *Digital Curation* 2nd ed. (Chicago: Neal Schuman, 2016). This is fairly expensive. You might want to share with other students…. Probably cheapest online. If the 2nd edition is not available you can also use the first edition, *Digital Curation: A How-To Manual*.

Coursera MOOC.

Please complete the following modules of my Coursera MOOC: Research Data Management and Sharing (https://www.coursera.org/learn/data-management#%20) by the following dates:
The MOOC content will serve as lectures for several of the weeks of the course so it is important to have completed viewing the modules by the above schedule.

**Supplemental Resources.**

DCC Glossary: [http://www.dcc.ac.uk/digital-curation/glossary](http://www.dcc.ac.uk/digital-curation/glossary)


DCC How-To Guides: [http://www.dcc.ac.uk/resources/how-guides](http://www.dcc.ac.uk/resources/how-guides)

DCC Briefing Papers: [http://www.dcc.ac.uk/resources/briefing-papers](http://www.dcc.ac.uk/resources/briefing-papers)

**Accommodations or Special Needs.**

If you feel that you may need an accommodation for a disability or have any other special need, please contact me. I will best be able to address special circumstances if I know about them early in the semester.

**Diversity Statement.**

“In support of the University’s diversity goals and the mission of the School of Information and Library Science, SILS embraces diversity as an ethical and societal value. We broadly define diversity to include race, gender, national origin, ethnicity, religion, social class, age, sexual orientation, and physical and learning ability. As an academic community committed to preparing our graduates to be leaders in an increasingly multicultural and global society we strive to:

- Ensure inclusive leadership, policies and practices;
- Integrate diversity into the curriculum and research;
- Foster a mutually respectful intellectual environment in which diverse opinions are valued;
- Recruit traditionally underrepresented groups of students, faculty and staff; and
- Participate in outreach to underserved groups in the State.

The statement represents a commitment of resources to the development and maintenance of an academic environment that is open, representative, reflective and committed to the concepts of equity and fairness.”

**Syllabus Changes.**

The professor reserves to right to make changes to the syllabus, including but not limited to project due dates, readings, and in class exercises. These changes will be announced as early as possible.
Weekly Course Calendar

Week 1, January 12-18: Introduction, Syllabus, and Context

Please read the syllabus first thing and ask any questions you may have. Make sure you respond to all the forum questions by Tuesday at 11:55 PM each week so as to allow us to read all of the posts before week’s end.

*Please watch this short video first. This sums up much of what is going on in data sharing and the challenges data curators face on a day-to-day basis. Enjoy.
http://www.youtube.com/watch?v=N2zK3sAtr-4


**Data Models**

Digital Curation Lifecycle Model: http://www.dcc.ac.uk/docs/publications/DCCLifecycle.pdf
Data Curation Profiles


Week 2, January 19-25: All about Data


Week 3, February 26 – February 1: Digital Data Sharing and Reuse: The Fundamentals


Please visit the following library Research Data Management websites to see how librarians are presenting the importance of RDM and data sharing to their academic communities.

University of Edinburgh. Research Data Service. [https://www.ed.ac.uk/information-services/research-support/research-data-service](https://www.ed.ac.uk/information-services/research-support/research-data-service)

University of Leicester. “What is Research Data Management?” [https://www2.le.ac.uk/services/research-data/rdm/what-is-rdm](https://www2.le.ac.uk/services/research-data/rdm/what-is-rdm) and “What is Digital Curation?” [https://www2.le.ac.uk/services/research-data/rdm/what-is-rdm/digital-curation](https://www2.le.ac.uk/services/research-data/rdm/what-is-rdm/digital-curation)

**Week 4, February 2-8: Big Data and DataNet**

**Big Data**


**DataNet**


SEAD: Sustainable Environment through Actionable Data: [http://sead-data.net/](http://sead-data.net/)


**Week 5, February 9-15: Digital Data and the Evolution of Scholarship (E-Science/Cyberscholarship)**

**Curation Profile Progress Report DUE by February 15th.**


**Week 6, February 16-22: The Role of Archives in Data Curation**

**Data Curation Approach for Your Personal Digital Materials DUE February 22th.**


Week 7, February 23 - March 1: The Roles of Libraries and Institutional Repositories in Data Curation

Data Confidence Exercise DUE March 1st.


Harvey, Ross, “Curation and Curators,” in Gillian Oliver & Ross Harvey, Digital Curation (Chicago: Neal Schuman, 2016), 55-63.


Weibel, Gunther. “Are Data Repositories the New Institutional Repositories?” *Weibel Lines Blog*


**Week 8, March 2-8: Education, Training, and Skilling Up**

*Workflow Tool Analysis DUE March 8th.*


**Week 9, March 9-22: Data Management Plans & Policy**

**Data Management Plan Critique DUE March 22nd.**


Harvey, Ross, “Preservation Planning and Policy,” in Gillian Oliver & Ross Harvey, Digital Curation (Chicago: Neal Schuman, 2016), 83-92.


**Tools to Explore:**

CDL. UC3 “Manage Your Data.” http://www.cdlib.org/services/uc3/datamanagement/


DCC. DMPT Online: Data Management Planning Tool. http://dmponline.dcc.ac.uk/


ICPSR. “Guidelines for Effective Data Management Plans.” http://www.icpsr.umich.edu/icpsrweb/ICPSR/dmp/index.jsp


NSF. Dissemination and Sharing of Research Results NSF Data Management Plan Requirements


University of North Carolina at Chapel Hill. Provost’s Taskforce on the Stewardship of Digital Research Data.” “Research Data Stewardship at UNC: Recommendations for Scholarly Practice

Week 10, March 23-29: Metadata


Harvey, Ross, “Description and Representation Information,” in Gillian Oliver & Ross Harvey, Digital Curation (Chicago: Neal Schuman, 2016), 65-82.


Week 11: March 30 - April 5: Data and the Social Sciences

DDI, Data Documentation Initiative. http://www.ddialliance.org/

DVN, Dataverse Network Repository Software. www.thedata.org


King, Gary. “Ensuring the Data-Rich Future of the Social Sciences,” Science 331 no. 6018, 719-721 http://www.sciencemag.org/content/331/6018/719.short


Week 12: April 6-12: Data and the Arts and Humanities

Curation Profile Presentation to Class (Video) DUE by April 12th.

Week 13, April 13-19: Data for Science and Health Research

Feedback to Classmates on Their DCPs DUE April 19th.


Week 14, April 20-26: Auditing, Risk Management, Costing, Trust, and Sustainability


**Monday, April 30 by 4:00 PM.**

*Curation Profile Written Report (Post to Class) DUE.*