



# INLS 756: Data Curation and Management

Spring 2018

## The Instructor.

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## Course Timeline.

First Week of Classes: January 12, 2018.

Spring Break: March 12 - 16, 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.<sup>1</sup>

## 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.

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<sup>1</sup> 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](mailto: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 for others' posts.

### **Assignments & Evaluation.**

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

## 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/>. Please read through The Honor System's Module at: <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/>) 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/>) 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* 2<sup>nd</sup> ed. (Chicago: Neal Schuman, 2016). This is fairly expensive. You might want to share with other students.... Probably cheapest online. If the 2<sup>nd</sup> 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:

1: Understanding Research Data	January 25
2: Data Management Planning	March 22
3. Working with Data	February 15
4. Sharing Data	February 1
5. Archiving Data	February 22

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>

DCC Curation Reference Manual: <http://www.dcc.ac.uk/resources/curation-reference-manual/completed-chapters>

DCC How-To Guides: <http://www.dcc.ac.uk/resources/how-guides>

DCC 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>

Beagrie, Neil. "Digital Curation for Science, Digital Libraries, and Individuals." *International Journal of Digital Curation*, Vol 1, No 1 (Autumn 2006): 4-16.

<http://www.ijdc.net/index.php/ijdc/article/viewFile/6/2>

Digital Curation Centre. *Managing Research Data*. Video Documentary. UK: Piers Video Production, 2012. <http://youtu.be/2JBQS0qKOBu>

Gillian Oliver & Ross Harvey. "Introduction" (3-18), "The Changing Landscape" (19-31), and "Conceptual Models" (33-44) in Gillian Oliver & Ross Harvey, *Digital Curation* (Chicago: Neal Schuman, 2016).

Higgins, Sarah. "The Lifecycle of Data Management," in Graham Pryor (ed.), *Research Data Management* (London: Facet, 2012), 17-45. In Sakai.

Ogburn, Joyce. "The Imperative for Data Curation," *portal: Libraries and the Academy* 10, number 2 (2010), 241-246. [UNC eJournals]

Pryor, Graham. "Why Manage Research Data?" In Graham Pryor (ed.), *Research Data Management* (London: Facet, 2012), 1-16. In Sakai.

Tibbo, Helen. "Placing the Horse before the Cart: Conceptual and Technical Dimensions of Digital Curation," *Historical Social Research* 37 (2012), 187-200. [http://www.cceh.uni-koeln.de/files/Tibbo\\_final.pdf](http://www.cceh.uni-koeln.de/files/Tibbo_final.pdf).

### Data Models

Matrix of Digital Curation Knowledge and Competencies: <http://ils.unc.edu/digccurr/digccurr-matrix.html>

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

Continuum Model: <http://john.curtin.edu.au/society/australia/>

## Data Curation Profiles

Purdue University Libraries. *Data Curation Profiles Toolkit*. <http://datacurationprofiles.org/>

Witt, M. et al. "Constructing Data Curation Profiles." *The International Journal of Digital Curation* 3(4) (2009): 93-103. <http://ijdc.net/index.php/ijdc/article/viewFile/137/165>

Witt, M. and Carlson, J. (2007). "Conducting a Data Interview" (poster).  
[http://docs.lib.purdue.edu/lib\\_research/81/](http://docs.lib.purdue.edu/lib_research/81/)

## Week 2, January 19-25: All about Data

Bell, G., Hey, T., and Szalay, A. "Beyond the Data Deluge." *Science*, 323 (5919 6 March 2009), 1297-1298.  
[http://www.cloudinnovation.com.au/Bell\\_Hey%20Szalay\\_Science\\_March\\_2009.pdf](http://www.cloudinnovation.com.au/Bell_Hey%20Szalay_Science_March_2009.pdf)

Harvey, Ross. "Defining Data," in Gillian Oliver & Ross Harvey, *Digital Curation* (Chicago: Neal Schuman, 2016), 45-52.

Carlson, Samuelle and Ben Anderson, "What are Data? The Many Kinds of Data and Their Implications for Data Re-use." *Journal of Computer-Mediated Communication*, 12/2 (2007): 301-317. [UNC eJournals]

Heidorn, Bryan P. "Shedding Light on the Dark Data in the Long Tail of Science." *Library Trends* 57, no. 2 (2008): 280-299. <http://hdl.handle.net/2142/10672>

Jahnke, Lori, Andrew Asher, and Spencer D. C. Keralis. *The Problem of Data*. Washington, DC: Council on Library and Information Resources, 2012.  
<http://www.clir.org/pubs/reports/pub154>. Please read p. 1-21.

Long-Lived Digital Data Collections. National Science Board. 2005.  
<http://www.nsf.gov/pubs/2005/nsb0540/>. Please read p. 9-12 and 43-49.

McGovern, Nancy. *Challenges of Working with Research Data*. Video. University of North Carolina at Chapel Hill: Closing the Digital Curation Gap, 2012. <http://youtu.be/5OerCanjZ00>

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

Borgman, Christine L. "The Conundrum of Sharing Research Data." *Journal of the American Society for Information Science and Technology* 63, no. 6 (2012): 1059–1078. doi:10.1002/asi.22634.  
<http://onlinelibrary.wiley.com/doi/10.1002/asi.22634/pdf>

Council on Information and Information Resources, "Research Data Management Principles, Practices, and Prospects (Council on Library and Information Resources, 2013).  
<http://www.clir.org/pubs/reports/pub160/pub160.pdf>. Please read p. 1-15.



Gerwin. "Data Sharing: An Open Mind on Open Data." *Nature* 529 (07 January 2016): 117–119. doi:10.1038/nj7584-117a.

Kroll, Rick, and Susan Forsman. *A Slice of Research Life: Information Support for Research in the United States*. <https://www.oclc.org/content/dam/research/publications/library/2010/2010-15.pdf>  
LeClere, Felicia, "Too Many Researchers Are Reluctant to Share Their Data," *The Chronicle of Higher Education* (3 August 2010). <https://chronicle.com/article/Too-Many-Researchers-Are/123749/>

Nelson, Bryn, "Empty Archives," *Nature* 461 (2009): 160-163.  
<http://www.nature.com/news/2009/090909/full/461160a.html>

Rusbridge, Chris. "Create, Curate, Re-use: The Expanding Life Course of Digital Research Data." In: *Educause Australasia* (2007): 1 - 11. <http://www.era.lib.ed.ac.uk/handle/1842/1731>

SCARP Project. "Disciplinary Approaches to Sharing, Curation, Reuse and Preservation." SCARP Final Report. 2009.  
<http://www.dcc.ac.uk/sites/default/files/documents/scarp/SCARP-FinalReport-Final-SENT.pdf>

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>

University of Leicester. "What is Research Data Management?"  
<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>

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

### Big Data

Bollier, D. "The Promise and Peril of Big Data." [http://www.aspeninstitute.org/sites/default/files/content/docs/pubs/The\\_Promise\\_and\\_Peril\\_of\\_Big\\_Data.pdf](http://www.aspeninstitute.org/sites/default/files/content/docs/pubs/The_Promise_and_Peril_of_Big_Data.pdf) (11 July 2011).

Boyd, Danah and Kate Crawford, "Critical Questions for Big Data," *Information, Communication, and Society* 15, number 5 (2012), 662-679. <http://dx.doi.org/10.1080/1369118X.2012.678878>  
[UNC eJournals]

Lynch, Clifford. "Big Data: How Do Your Data Grow?" *Nature* 455, no. 7209 (September 4, 2008): 28–29. doi:10.1038/455028a. [UNC eJournals]

Manyika, James, Michael Chui, Brad Brown, Jacques Bughin, Richard Dobbs, Charles Roxburgh, and Angela Hung Byers. *Big Data: The Next Frontier for Innovation, Competition, and Productivity*. McKinsey Global Institute, May 2011.

[http://www.mckinsey.com/insights/business\\_technology/big\\_data\\_the\\_next\\_frontier\\_for\\_innovation](http://www.mckinsey.com/insights/business_technology/big_data_the_next_frontier_for_innovation)

World Economic Forum. *Big Data, Big Impact: New Possibilities for International Development*. Briefing Paper. Geneva, Switzerland: World Economic Forum, 2012.

[http://www3.weforum.org/docs/WEF\\_TC\\_MFS\\_BigDataBigImpact\\_Briefing\\_2012.pdf](http://www3.weforum.org/docs/WEF_TC_MFS_BigDataBigImpact_Briefing_2012.pdf).

### DataNet

Mayernik, Matthew S., G. Sayeed Choudhury, Tim DiLauro, Elliot Metsger, Barbara Pralle, Mike Rippin, and Ruth Duerr. "The Data Conservancy Instance: Infrastructure and Organizational Services for Research Data Curation." *D-Lib Magazine* 18, no. 9/10 (2012).

<http://www.dlib.org/dlib/september12/mayernik/09mayernik.html>

Michener, William, Todd Vision, Patricia Cruse, Dave Viegla, John Kunze, and Greg Janée.

"DataONE: Data Observation Network for Earth—Preserving Data and Enabling Innovation in the Biological and Environmental Sciences." *D-Lib Magazine* 17, no. 1/2 (2011).

<http://www.dlib.org/dlib/january11/michener/01michener.html>

SEAD: Sustainable Environment through Actionable Data: <http://sead-data.net/>

The DataNet Federation Consortium: <http://datafed.org/>

*Terra Populus*: <http://www.terrapop.org/>

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

### Curation Profile Progress Report DUE by February 15<sup>th</sup>.

Arms, William Y. "Cyberscholarship: High Performance Computing Meets Digital Libraries." *Journal of Electronic Publishing* 11/1 (Winter 2008). <http://quod.lib.umich.edu/cgi/t/text/text-idx?c=jep;view=text;rgn=main;idno=3336451.0011.103>

Atkins, Daniel, et al. "Report of the National Science Foundation Blue-Ribbon Panel on Cyberinfrastructure" (2003). <http://www.nsf.gov/cise/sci/reports/atkins.pdf>. Please read Executive Summary, ES1-6.

Borgman, Christine. "Scholarship in the Digital Age: Information, Infrastructure, and the Internet." 2009. Video. <http://www.youtube.com/watch?v=A9CDYWw8qIc>.

Bowker Geoffrey C., and Susan Leigh Star. "Cyberscholarship; or, "A Rose Is a Rose Is a ..."" *EDUCAUSE Review*. 44/3 (2009): 6-7. <http://www.educause.edu/ero/article/cyberscholarship-or-rose-rose>

Green, David and Michael Roy. "Things to Do While Waiting for the Future to Happen: Building Cyberinfrastructure for the Liberal Arts." *EDUCAUSE Review* July/August (2008): 34-48. <http://net.educause.edu/ir/library/pdf/ERM0842.pdf>

Hey, T., S. Tansley, and K. Tolle. "Jim Gray on eScience: A Transformed Scientific Method." In Hey, T., Tansley, S. and Tolle, K. (Eds.). *The Fourth Paradigm: Data-Intensive Scientific Discovery*. Redmond, WA: Microsoft, 2009. xix-xxxiii. <http://research.microsoft.com/en-us/collaboration/fourthparadigm/>.

NSF Cyberinfrastructure Council. "NSF's Cyberinfrastructure Vision for 21<sup>st</sup> Century Discovery." National Science Foundation. (September 26, 2005). <http://www.nsf.gov/attachments/102806/public/NSFCyberinfrastructureVisionDraft-4.0.pdf>  
Please read chapter 1.

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

### Data Curation Approach for Your Personal Digital Materials DUE February 22<sup>th</sup>.

Gilliland-Swetland, Anne J. *Enduring Paradigm, New Opportunities: The Value of the Archival Perspective in the Digital Environment*. Washington, DC: Council on Library and Information Resources, 2000. <http://www.clir.org/pubs/reports/pub89/contents.html>

Lee, Christopher A., and Helen Tibbo. "Where's the Archivist in Digital Curation? Exploring the Possibilities through a Matrix of Knowledge and Skills." *Archivaria* 72 (2011): 123-68. <http://journals.sfu.ca/archivar/index.php/archivaria/article/viewArticle/13362>

Marshall, Cathy C. "From Writing and Analysis to the Repository: Taking the Scholars' Perspective on Scholarly Archiving." *Proceedings of JCDL'08*, June 16-20, 2008, Pittsburgh, PA, USA. (2008): 251-260. <http://www.csdl.tamu.edu/~marshall/p251-marshall-final.pdf>

Palmer, Carole L., Nicholas M. Weber, Trevor Munoz, and Allen H. Renear. "Foundations of Data Curation: The Pedagogy and Practice of 'Purposeful Work' with Research Data." *Archive Journal* no. 3 (2013). <http://www.archivejournal.net/issue/3/archives-remixed/foundations-of-data-curation-the-pedagogy-and-practice-of-purposeful-work-with-research-data/>.

Redwine, Gabriella, et al., *Born Digital: Guidance for Donors, Dealers, and Archival Repositories*, Washington, D.C.: Council on Library and Information Resources, 2013). <http://www.clir.org/pubs/reports/pub159/pub159.pdf>

Ross, Seamus. Keynote speech at the European Conference on Digital Libraries (ECDL) 2007. [http://www.ecdl2007.org/Keynote\\_ECDL2007\\_SROSS.pdf](http://www.ecdl2007.org/Keynote_ECDL2007_SROSS.pdf)

Tibbo, Helen R. "On the Nature and Importance of Archiving in the Digital Age." In *Advances in Computing* v. 57. Elsevier, 2003, 1-67. In Sakai.

Wallis, Jillian C., Christine L. Borgman, Matthew S. Mayernik, and Alberto Pepe. "Moving Archival Practices Upstream: An Exploration of the Life Cycle of Ecological Sensing Data in Collaborative Field Research." *International Journal of Digital Curation* 3/1 (2008) 114-126.  
<http://www.ijdc.net/index.php/ijdc/article/viewFile/67/46>

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

### Data Confidence Exercise DUE March 1<sup>st</sup>.

Association of Research Libraries. Repository Issues Task Force. "The Research Library's Role in Digital Repository Services. Final Report of the ARL Digital Repository Issues Task Force." (2009). <http://www.arl.org/storage/documents/publications/repository-services-report-jan09.pdf>

Corrall, Sheila, "Roles and Responsibilities: Libraries, Librarians and Data," in Pryor (ed.), *Research Data Management* (London: Facet, 2012), 105-133. In Sakai.

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

Cragin, Melissa H., Carole L. Palmer, Jacob R. Carlson and Michael Witt. "Data Sharing, Small Science and Institutional Repositories." *Transactions of the Royal Society A*. vol. 368 no. 1926 (13 September 2010): 4023-4038. <http://rsta.royalsocietypublishing.org/content/368/1926/4023.full>

Gold, Anna. "Data Curation and Libraries: Short-Term Developments, Long-Term Prospects." California Polytechnic State University, San Luis Obispo: Office of the Dean (Library), 2010. [http://digitalcommons.calpoly.edu/lib\\_dean/27](http://digitalcommons.calpoly.edu/lib_dean/27)

Lyon, Liz. *Dealing with Data: Roles, Rights, Responsibilities, and Relationships*. Consultancy Report. UK: UKOLN, University of Bath, June 19, 2007. [http://www.ukoln.ac.uk/ukoln/staff/e.j.lyon/reports/dealing\\_with\\_data\\_report-final.pdf](http://www.ukoln.ac.uk/ukoln/staff/e.j.lyon/reports/dealing_with_data_report-final.pdf)

Mitchell, Erik T. "Research Support: The New Mission for Libraries." *Journal of Web Librarianship* 7, no. 1 (January 2013): 109–113. doi:10.1080/19322909.2013.757930. [UNC eJournals]

Pryor, G. and Donnelly, M. "Skilling Up to Do Data: Whose Role, Whose Responsibility, Whose Career?" *International Journal of Digital Curation*, Vol. 4, issue 2 (2009): 158-170. <http://www.ijdc.net/index.php/ijdc/article/view/126/133>

Tenopir, Carol, Ben Birch, and Suzie Allard. *Academic Libraries and Research Data Services: Current Practices and Plans for the Future*. Chicago: Association of College and Research Libraries, 2012. [http://www.ala.org/acrl/sites/ala.org.acrl/files/content/publications/whitepapers/Tenopir\\_Birch\\_Allard.pdf](http://www.ala.org/acrl/sites/ala.org.acrl/files/content/publications/whitepapers/Tenopir_Birch_Allard.pdf)

Weibel, Gunther. "Are Data Repositories the New Institutional Repositories?" *Weibel Lines Blog* <http://weibel-lines.typepad.com/weibelines/2009/03/are-data-repositories-the-new-institutional-repositories.html>

Witt, Michael. "Institutional Repositories and Research Data Curation in a Distributed Environment." *Library Trends* 57/2 (2009). [UNC eJournals]

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

### Workflow Tool Analysis DUE March 8<sup>th</sup>.

Kim, Youngseek, Benjamin K. Addom, and Jeffrey M. Stanton. "Education for eScience Professionals: Integrating Data Curation and Cyberinfrastructure." *International Journal of Digital Curation* 6, no. 1 (2011): 125-138. <http://www.ijdc.net/index.php/ijdc/article/view/168>

Cirinnà, Chiara, et al. (eds.), *Proceedings of the Framing the Digital Curation Curriculum Conference (DigCurV)*. Florence, Italy, 6-7 May, 2013. <http://www.digcur-education.org/eng/Resources/DigCurV-2013-proceedings>

Creamer, Andrew T., Myrna E. Morales, Donna Kafel, Javier Crespo, and Elaine R. Martin. "A Sample of Research Data Curation and Management Courses." *Journal of eScience Librarianship* 1, no. 2 (2012). <http://dx.doi.org/10.7191/jeslib.2012.1016>

Renear, Allen H.; Palmer, Carole L., and John Unsworth. *Extending Data Curation to the Humanities: Curriculum Development and Recruiting*. Urbana-Champaign: Graduate School of Library and Information Science, University of Illinois at Urbana-Champaign, 2013. <http://hdl.handle.net/2142/42628>

Schmidt, Birgit and Kathleen Shearer. "Librarians' Competencies Profile for Research Data Management." Joint Task Force on Librarians' Competencies in Support of E-Research and Scholarly Communication. (June 2016). [https://sakai.unc.edu/access/content/attachment/61fb0084-7d86-4a40-8184-13802d8b2bc5/Messages/dc5fa6a4-2899-4cd0-9ea2-31580b997a07/Competencies-for-RDM\\_June-2016.pdf](https://sakai.unc.edu/access/content/attachment/61fb0084-7d86-4a40-8184-13802d8b2bc5/Messages/dc5fa6a4-2899-4cd0-9ea2-31580b997a07/Competencies-for-RDM_June-2016.pdf)

Tibbo, Helen R., C. Hank, C.A. Lee, & R. Clemens (Eds.), *Proceedings of DigCCurr2009: Digital Curation: Practice, Promise, and Prospects*, April 3-5, 2009, Chapel Hill, NC, 2-3. Chapel Hill, NC: School of Information and Library Science, University of North Carolina at Chapel Hill. Available as free download at: <http://stores.lulu.com/DigCCurr2009>. (Browse)

Weber, Nicholas M., Carole L. Palmer, and Tiffany C. Chao. "Current Trends and Future Directions in Data Curation Research and Education." *Journal of Web Librarianship* 6, no. 4 (2012): 305-320. <http://www.tandfonline.com/doi/full/10.1080/19322909.2012.730358>

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

### Data Management Plan Critique DUE March 22<sup>nd</sup>.

Bohémier, Kayleigh Ayn, Thea Atwood, Andreas Kuehn, and Jian Qin. "A Content Analysis of Institutional Data Policies." In *Proceedings of the 11th Annual International ACM/IEEE Joint Conference on Digital Libraries*, 409–410. Ottawa, Canada: ACM Press, 2011. doi:10.1145/1998076.1998159. [ACM Digital Library via UNC Libraries]

Dietrich, Dianne, Trisha Adamus, Alison Miner, and Gail Steinhart. "De-mystifying the Data Management Requirements of Research Funders." *Issues in Science and Technology Librarianship*. Summer (2012). doi:10.5062/F44M92G2. [UNC e-Journals]

Donnelly, Martin, "Data Management Plans and Planning," in Pryor (ed.), *Research Data Management* (London: Facet, 2012), 83-103. In Sakai.

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

Haywood, Jeff. *Research Data Management Policies*. Video. Edinburgh, UK: University of Edinburgh. Accessed October 3, 2013. [http://youtu.be/V8IIdfBAr\\_0](http://youtu.be/V8IIdfBAr_0)

Holdren, John P. "Memorandum for the Heads of Executive Departments and Agencies." Office of Science and Technology Policy, Executive Office of the President, February 22, 2013. [http://www.whitehouse.gov/sites/default/files/microsites/ostp/ostp\\_public\\_access\\_memo\\_2013.pdf](http://www.whitehouse.gov/sites/default/files/microsites/ostp/ostp_public_access_memo_2013.pdf).

Hswe, Patricia, and Ann Holt. "Joining in the Enterprise of Response in the Wake of the NSF Data Management Planning Requirement." *Research Library Issues*, no. 274 (2011): 11-17. <http://publications.arl.org/rli274/12>

Jones, Sarah, "Research Data Policies: Principles, Requirements and Trends," in Pryor (ed.), *Research Data Management* (London: Facet, 2012), 47-66.

Mervis, Jeffrey. "NSF to Ask Every Grant Applicant for Data Management Plan." *Science Insider*. May 5, 2010. <http://news.sciencemag.org/scienceinsider/2010/05/nsf-to-ask-every-grantapplicant.html>

National Academy of Science. *Ensuring the Integrity, Accessibility, and Stewardship of Research Data in the Digital Age*. Washington, DC: NAS, 2009. [http://www.nap.edu/catalog.php?record\\_id=12615](http://www.nap.edu/catalog.php?record_id=12615). Please read p. 1-9.

Sallans, Andrew, and Martin Donnelly. "DMP Online and DMPTool: Different Strategies towards a Shared Goal." *International Journal of Digital Curation* 7, no. 2 (2012): 123-129. <http://www.ijdc.net/index.php/ijdc/article/view/225>

Steinhart, Gail, Eric Chen, Florio Arguillas, Dianne Dietrich, and Stefan Kramer. "Prepared to Plan? A Snapshot of Researcher Readiness to Address Data Management Planning Requirements." *Journal of eScience Librarianship* 1, no. 2 (2012).

<http://dx.doi.org/10.7191/jeslib.2012.1008>

Team Digital Preservation. "Team Digital Preservation and the Arctic Mountain Adventure." (2009) <http://www.youtube.com/watch?v=PGFOZLecjTc>

### **Tools to Explore:**

CDL. UC3 "Manage Your Data." <http://www.cdlib.org/services/uc3/datamanagement/>.

DataOne. Data Management Plans. <https://www.dataone.org/data-management-planning>

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

Donnelly, Martin, and Sarah Jones. "Checklist for a Data Management Plan." Digital Curation Centre, March 17, 2011. [http://www.dcc.ac.uk/sites/default/files/documents/data-forum/documents/docs/DCC\\_Checklist\\_DMP\\_v3.pdf](http://www.dcc.ac.uk/sites/default/files/documents/data-forum/documents/docs/DCC_Checklist_DMP_v3.pdf).

ICPSR. "Guidelines for Effective Data Management Plans." <http://www.icpsr.umich.edu/icpsrweb/ICPSR/dmp/index.jsp>

MIT Libraries. "Data Management and Publishing." <http://libraries.mit.edu/guides/subjects/data-management/plans.html>

NSF. Dissemination and Sharing of Research Results [NSF Data Management Plan Requirements](#)

NSF. Data Management for NSF Engineering Directorate Proposals and Awards. [http://www.nsf.gov/eng/general/ENG\\_DMP\\_Policy.pdf](http://www.nsf.gov/eng/general/ENG_DMP_Policy.pdf)

NSF Guide to Grant Applications (effective January 18, 2011). [http://www.nsf.gov/pubs/policydocs/grantsgovguide0111.pdf?WT.mc\\_id=USNSF\\_179](http://www.nsf.gov/pubs/policydocs/grantsgovguide0111.pdf?WT.mc_id=USNSF_179)

UK Data Archives. "Managing and Sharing Data." May 2011. <http://www.data-archive.ac.uk/media/2894/managingsharing.pdf>

UNC University Libraries. "Research Data Toolkit: Resources for Writing a Data Management Plan." [http://www.lib.unc.edu/reference/data\\_services/researchdatatoolkit/index.html](http://www.lib.unc.edu/reference/data_services/researchdatatoolkit/index.html)

University of California Curation Center of the California Digital Library. "DMPTool: Guidance and Resources for Your Data Management Plan." *DMPTool: Guidance and Resources for Your Data Management Plan*, 2013. <https://dmp.cdlib.org/>.

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



and Leadership.” Chapel Hill: UNC, February 15, 2012.

[http://sil.unc.edu/sites/default/files/general/research/UNC\\_Research\\_Data\\_Stewardship\\_Report.pdf](http://sil.unc.edu/sites/default/files/general/research/UNC_Research_Data_Stewardship_Report.pdf)

## Week 10, March 23-29: Metadata

Blank, Grant, and Karsten Rasmussen. “The Data Documentation Initiative: The Value and Significance of a Worldwide Standard.” *Social Science Computer Review* no. 22 (2004): 307–318. doi:10.1177/0894439304263144. [UNC e-Journals]

Chin, George Jr., and Carina S. Lansing. “Capturing and Supporting Contexts for Scientific Data Sharing via the Biological Sciences Collaboratory.” *Proceedings of the 2004 ACM Conference on Computer Supported Cooperative Work* (2004): 409-418.

<http://portal.acm.org/citation.cfm?id=1031677>

Dappert, Angela and Adam Farquhar. “Implementing Metadata that Guide Digital Preservation Services.” *International Journal of Digital Curation*. Vol. 6, Issue 1 (2011): 238-254.

<http://www.ijdc.net/index.php/ijdc/article/viewFile/176/245>

Guttenbrunner, Mark. “Preserving Interactive Content: Strategies, Significant Properties and Automatic Testing.” In *The Proceedings of the 8th International Student Workshop: Dedinky, Slovakia June 26-29, 2008*. (2008):43-52 [http://publik.tuwien.ac.at/files/PubDat\\_172294.pdf](http://publik.tuwien.ac.at/files/PubDat_172294.pdf).

Gilliland, Anne. “Setting the Stage.” In: *Introduction to Metadata*. Online Edition, Version 3.0. Also read: “Practical Principles for Metadata Creation and Maintenance.”

[http://www.getty.edu/research/publications/electronic\\_publications/intrometadata/index.html](http://www.getty.edu/research/publications/electronic_publications/intrometadata/index.html)

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

Knight, Gareth and Maureen Pennock. “Data without Meaning: Establishing the Significant Properties of Digital Research.” *International Journal of Digital Curation* 4(1) (2009): 159-174.

<http://ijdc.net/index.php/ijdc/article/view/110/0>

Simmhan, Yogesh, Beth Plale, and Dennis Gannon. “A Survey of Data Provenance in e-Science.” *SIGMOD Record*, Vol. 34, No. 3 (Sept. 2005): 31-36.

<http://pti.iu.edu/sites/default/files/simmhanSIGMODrecord05.pdf>

Lavoie, Brian, and Richard Gartner. *Preservation Metadata*. DPC Technology Watch Report 05-01. Sponsors: OCLC Online Computer Library Center, Oxford University Library Services, Digital Preservation Coalition. 2005. <http://www.dpconline.org/advice/technology-watch-reports>

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



Crosas, M. "The Dataverse Network: An Open-Source Application for Sharing, Discovering and Preserving Data." (2011). <http://www.dlib.org/dlib/january11/crosas/01crosas.html>

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

DVN, Dataverse Network Repository Software. [www.thedata.org](http://www.thedata.org)

Green, A.G. and M. Gutmann. "Building Partnerships among Social Science Researchers, Institution-Based Repositories and Domain Specific Data Archives." *OCLC Systems & Services: International Digital Library Perspectives* 23 (2007): 35-53. [UNC eJournals]

Inter-university Consortium for Political and Social Research (ICPSR). *Guide to Social Science Data Preparation and Archiving: Best Practice Throughout the Data Life Cycle*. 5th ed. Ann Arbor, MI: ICPSR, 2012. <http://www.icpsr.umich.edu/files/ICPSR/access/dataprep.pdf>.

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>

King, Gary. "An Introduction to the Dataverse Network as an Infrastructure for Data Sharing." *Sociological Methods & Research*, 36/2 (2007): 173-199. <http://gking.harvard.edu/files/dvn.pdf>

Sawyer, Steve, Elizabeth Kaziunas, and Carsten Øesterlund. "Social Scientists and Cyberinfrastructure." In *Proceedings of the ACM 2012 Conference on Computer Supported Cooperative Work*, 931-934. Seattle, WA: ACM Press, 2012. doi:10.1145/2145204.2145342.  
Social Science Data Archives. <http://www.socsciresearch.com/r6.html>

Van den Eynden, Veerle, Libby Bishop, Laurence Horton, and Louise Corti. "Data Management Practices in the Social Sciences." Essex: UK Data Archive, 2010. Available at: <http://www.data-archive.ac.uk/about/publications>.

Vardigan, Mary and Cole Whiteman. "ICPSR Meets OAIS: Applying the OAIS Reference Model to the Social Science Archive Context." *Archival Science*, 7/1 (2007), 73-87. <http://hdl.handle.net/2027.42/60440> and UNC eJournals.

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

### Curation Profile Presentation to Class (Video) DUE by April 12<sup>th</sup>.

American Council of Learned Societies. "Our Cultural Commonwealth: The Report of the American Council of Learned Societies Commission on Cyberinfrastructure for the Humanities and Social Sciences." December 13, 2006, New York, NY: American Council of Learned Societies and the Andrew W. Mellon. Foundation, 2006  
<https://www.ideals.illinois.edu/handle/2142/189>

Benardou, Agiatis, Panos Constantopoulos, Costis Dallas, and Dimitris Gavrilis. "Understanding the Information Requirements of Arts and Humanities Scholarship." *International Journal of Digital Curation*. Vol. 5, Issue 1 (2010): 18-33. <http://ijdc.net/index.php/ijdc/article/view/144>

Borgman, Christine L. "The Digital Future is Now: A Call to Action for the Humanities." *Digital Humanities Quarterly* 3/4 (Fall 2009): <http://digitalhumanities.org/dhq/vol/3/4/000077/000077.html>

Flanders, Julia, and Trevor Munoz. "An Introduction to Humanities Data Curation." *DH Curation Guide: a Community Resource Guide to Data Curation in the Digital Humanities*. <http://guide.dhcurator.org/intro/>

Friedlander, Amy. "Asking Questions and Building a Research Agenda for Digital Scholarship." In *Working Together or Apart: Promoting the Next Generation of Digital Scholarship*. Washington, DC: Council on Library and Information Resources, 2009: 1-15. <http://www.clir.org/pubs/reports/pub145>.

Poole, Alex H. "Now is the Future Now? The Urgency of Digital Curation in the Digital Humanities," *Digital Humanities Quarterly* 7, number 2 (2013). <http://www.digitalhumanities.org/dhq/vol/7/2/000163/000163.html>

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

### Feedback to Classmates on Their DCPs DUE April 19<sup>th</sup>.

Albani, Sergio and David Giaretta. "Long-term Preservation of Earth Observation Data and Knowledge in ESA through CASPAR." *International Journal of Digital Curation* Vol. 4, Issue 3 (2009): 4-16. <http://www.ijdc.net/index.php/ijdc/article/viewFile/130/162>

Brunsmann, Jörg and Wolfgang Wilkes. "Enabling Product Design Reuse by Long-term Preservation of Engineering Knowledge." *International Journal of Digital Curation* Vol. 4, Issue 3 (2009): 17-28. <http://www.ijdc.net/index.php/ijdc/article/viewFile/131/149>

Duerr Ruth, et al. "Challenges in Long-Term Data Stewardship." In *Proceedings of the 21st IEEE Conference on Mass Storage Systems and Technologies*. 2004. 101-121. <http://storageconference.org/2004/Papers/05-Duerr-a.pdf>

Goodman, A. and C. G. Wong. "Bringing the Night Sky Closer: Discoveries in the Data Deluge." In Hey, T., Tansley, S. and K. Tolle, Eds. *The Fourth Paradigm: Data-Intensive Scientific Discovery*. Redmond, WA: Microsoft, 2009: 39-44. <http://research.microsoft.com/en-us/collaboration/fourthparadigm/>

Karasti, Helena, Karen S. Baker, and Eija Halkola. “[Enriching the Notion of Data Curation in E-Science: Data Managing and Information Infrastructuring in the Long Term Ecological Research \(LTER\) Network.](#)” *Computer Supported Cooperative Work (CSCW)*, 15(4) (2006): 321-358.

Pryor, Graham. “Multi-Scale Data Sharing in the Life Sciences: Some Lessons for Policy Makers.” *International Journal of Digital Curation* Vol. 4, Issue 3 (2009): 71-82.  
<http://www.ijdc.net/index.php/ijdc/article/view/135>

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

Barateiro, José. “Designing Digital Preservation Solutions: A Risk Management-Based Approach.” *International Journal of Digital Curation* Vol. 5, Issue 1 (2010): 4-17.  
<http://www.ijdc.net/index.php/ijdc/article/viewFile/143/205>

Beagrie, Neil, Julia Chruszcz, and Brian Lavoie. *Keeping Research Data Safe. A Cost Model and Guidance for UK Universities*. London: JISC, 2008.  
<http://www.jisc.ac.uk/media/documents/publications/keepingresearchdatasafe0408.pdf>

Beagrie, Neil, Brian Lavoie, and Matthew Woollard. *Keeping Research Data Safe 2*. UK: JISC, 2010.  
<http://www.jisc.ac.uk/media/documents/publications/reports/2010/keepingresearchdatasafe2.pdf>

Berman, Fran, Brian Lavoie, Paul Ayriss, Sayeed Choudhury, E. Cohen, Paul Courant, Lee Dirks, et al. “Sustainable Economies for a Digital Planet: Ensuring Long-Term Access to Digital Information.” Final Report of the Blue Ribbon Task Force on Sustainable Digital Preservation and Access. (February 2010). [http://brtf.sdsc.edu/biblio/BRTF\\_Final\\_Report.pdf](http://brtf.sdsc.edu/biblio/BRTF_Final_Report.pdf). Please read p. 1-7 and 73-85.

CCSDS. *Audit and Certification of Trustworthy Digital Repositories*. Magenta Book. Recommended Practice. September 2011. <http://public.ccsds.org/publications/archive/652x0m1.pdf>

Center for Research Libraries. *Trustworthy Repositories Audit and Certification: Criteria and Checklist*. Version 1.0. February 2007.  
<http://catalog.crl.edu/search~S1?Xtrusted+repositories&searchscope=1&SORT=R/Xtrusted+repositories&searchscope=1&SORT=R&SUBKEY=trusted%20repositories/1,15,15,B/1856~b2212602&FF=Xtrusted+repositories&searchscope=1&SORT=R&6,6,,1,0>

Data Archiving and Networked Services (DANS). “Data Seal of Approval.” *Data Seal of Approval*, 2008. <http://datasealofapproval.org/>

Ferriero, David. “ISO Standards for Certifying Trustworthy Digital Repositories.” *NARAtions: Blog of the Archivist of the United States*. (March 15, 2011) <http://blogs.archives.gov/online-public-access/?p=4697>

Klump, Jens. "Criteria for the Trustworthiness of Data Centres." *D-Lib Magazine* Volume 17, Number 1/2 (January/February 2011). <http://www.dlib.org/dlib/january11/klump/01klump.html>

Lavoie, Brian F., "Sustainable Research Data," in Pryor (ed.), *Research Data Management* (London: Facet, 2012), 67-82.

Ross, Seamus and Andrew McHugh. "The Role of Evidence in Establishing Trust in Repositories." *D-Lib Magazine* 12 7/8 (July/August 2006).  
<http://www.dlib.org/dlib/july06/ross/07ross.html>.

The Cost of Archiving: several short video talks from the Personal Digital Archiving Conference at the Internet Archive, February, 2011. Jeff Ubois, Stephen Griffin, David Rosenthal, Brewster Kahle, and panel discussion:  
<http://www.archive.org/search.php?query=collection%3Apersonalarchiveconf>

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

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