

INLS 756: Data Curation and Management

The Instructors.

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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. Speakers from the arts, humanities, social sciences, and sciences will discuss data requirements in their fields and data curators will discuss challenges and current best practices as well as resource allocators. Data management plans for various funders such as NSF and NIH will be explored and federal funders will join in this discussion.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.
- 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

¹ Thanks to Dr. Christine L. Borgman for many ideas for this syllabus along with Alex Poole and Thu-Mai Christian.

- 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, Thursdays 4:45 – 5:30. 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 so 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-Spring2014@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. Each week I will provide slides and 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.

Course Timeline.

First Week of Classes: January 8, 2014.

Spring Break: March 8 – 16, 2014.

Last Week of Classes: April 21, 2014.

Assignments & Evaluation.

<i>Assignment</i>	<i>% of Grade</i>	<i>Due Date</i>
Forum Posts (Analysis of Readings)	20%	On-going
Curation Profile Progress Report (Peer Review)	5%	Feb. 11
Data Curation Approach for Your Personal Digital Materials	10%	Feb. 18
Data Confidence Exercise	5%	Feb. 25
Workflow Tool Analysis	5%	Mar. 4
Critique Data Management Plan	10%	Mar. 18
Metadata Identification and Characterization Tools Exercise	5%	March 25
Curation Profile Presentation (Video to Class)	10%	April 8
DRAMBORA Exercise	5%	April 22
Curation Profile Written Report (Post to Class)	25%	Friday, May 2, by 4:00 PM

Class Participation

- You are expected to participate in discussion boards on a regular basis, preferably every week.
- You may create a new discussion topic, but please try to advance the discussion of an existing topic.
- Posts may address the readings and the other materials that are part of that week's assignments as well as any other topic relevant to a given week's content.
- Grades are assigned based on the quality of the posts rather than the quantity.
- 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
 - Level of insight displayed by the post
 - Depth of understanding of the material, i.e. the level of preparation shown in the post.
 - Inclusion of relevant materials outside the assigned readings

The purpose of the forum discussions is to help students 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, on Sakai.

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.kent.edu/dl/technology/etiquette.cfm>
<http://www.indiana.edu/~icy/netiquette.html>
<http://www.brighthub.com/education/online-learning/articles/26946.aspx>

Textbook.

Ross Harvey, *Digital Curation: A How-To-Do-It Manual* (New York: Neal Schuman, 2010).

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>

Spring 2014



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

DCC Briefing Papers: <http://www.dcc.ac.uk/resources/briefing-papers>

Weekly Course Calendar

Week 1, January 8-14: Introduction, Syllabus, and Context

*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>

Harvey, Ross. "Introduction" (3-18), "The Changing Landscape" (19-31), and "Conceptual Models" (33-44) in Ross Harvey, *Digital Curation: A How-To-Do-It Manual* (New York: Neal Schuman, 2010). Please purchase.

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.

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/

Week 2, January 15-21: 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

Harvey, Ross. "Defining Data," in Ross Harvey, *Digital Curation: A How-To-Do-It Manual* (New York: Neal Schuman, 2010), 45-51.

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, January 22-28: 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.

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>

Week 4, January 29 – February 4: 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 (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

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.

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 Vieglais, 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 5-11: Digital Data and the Evolution of Scholarship (E-Science/Cyberscholarship)

Curation Profile Progress Report DUE.

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 21st 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 12-18: The Role of Archives in Data Curation

Data Curation Approach for Your Personal Digital Materials DUE.

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

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 19-25: The Roles of Libraries and Institutional Repositories in Data Curation

Data Confidence Exercise DUE.

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 Ross Harvey, *Digital Curation: A How-To-Do-It Manual* (New York: Neal Schuman, 2010), 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

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

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

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, February 26-March 4: Education, Training, and Skilling Up

Wookflow Tool Analysis DUE.

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>

H.R. Tibbo, 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 5-18: Data Management Plans & Policy

Data Management Plan Critique DUE.

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* no. 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 Ross Harvey, *Digital Curation: A How-To-Do-It Manual* (New York: Neal Schuman, 2010), 83-92.

Haywood, Jeff. *Research Data Management Policies*. Video. Edinburgh, UK: University of Edinburgh. Accessed October 3, 2013. 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.

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>

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Week 13, April 16-22: Auditing, Risk Management, Costing, Trust, and Sustainability

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Week 14, April 23 – 25: Forensics, the Cloud, and the Future

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May 2, by 4:00 PM.

Curation Profile Written Report (Post to Class) DUE.