**INFORMATION SCHOOL**

**University of Washington**

**LIS 545 B - Data Curation I: Fundamentals  
Winter 2023**

**COURSE SYLLABUS**

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**Phone:** 406-366-3439

**COURSE DESCRIPTION**

Data curation is an emerging area of expertise for information professionals across sectors. This course introduces the principles and practices involved in the curation of digital research data to benefit research communities and organizations and open data to benefit the public. The course emphases curation expertise for development of accessible and reusable data resources, with a focus on data services in academic libraries and open access repositories to support research, as well as initiatives in government and public libraries to support open data for public use. But while the possibilities of data are exciting, they also present tremendous challenges: how to best organize and manage data, how to make data discoverable and accessible to diverse communities, and how to store and preserve data over long term.

Information professionals are perfectly situated to be a leader in the study and development of research data technologies and services. Methods for data management, access, organization, and preservation are active topics of research and development within universities, research centers, and government agencies. Information professionals in many institutions are being tasked with addressing the emerging practical problems that high volume digital data collections present. In response, libraries are building collaborations with scientists, data managers, and software engineers to investigate and address data curation needs and challenges. The skills that information professionals have are essential in the design, operation, and evaluation of distributed systems for data access and sharing.

**Learning Outcomes, Goals & OBJECTIVES**

As a result of successfully completing this course, the student will understand data curation as an intellectual and professional topic, as evidenced by ability to:

1. Understand how current library and information science professionals are engaging in the management and curation of research data.
2. Identify key challenges related to research data curation.
3. Discuss and identify data curation needs with experts in any field.
4. Evaluate data repository functions and scopes.
5. Understand how to analyze metadata schemas for research data.
6. Understand recent initiatives related to data citation and publication.
7. Create and evaluate data management plans.
8. Be able to present information professional perspectives on data management and curation.

**Acknowledgements**

This syllabus benefitted from helpful conversations and syllabi shared by Carole Palmer, Amelia Acker, Heather Bowden, Peter Organisciak, and Nic Weber.

**COURSE POLICIES**

**Syllabus**: This syllabus may be altered based on the discretion of the instructor.

**Faculty Responsibilities**

My role in this course is to serve as a facilitator, and to provide you with the foundation to continue to explore data curation topics when you leave the classroom. I will present you with information related to the subject, and will help you to synthesize the material used in class. I will both ask and answer questions; this class is your opportunity to explore the issues. If anything appears unclear, or if you have any questions, please ask me.

**Student Responsibilities**

As a student in this course, you are expected to challenge yourself, to actively participate in your education, and to search for answers to your questions. You are expected to be an involved participant in the class. Most importantly, you are expected to learn, and to leave this course with new ideas. When submitting writing assignments, the *American Psychological Association* (APA) publication style is the recommended style manual, but many other styles exist. All bibliographical sources should be fully and consistently annotated using APA or another established style.

**Required Course Materials**The course materials are provided as links or downloads in the Module pages.

**Course Format/Structure**This course begins on Tuesday, Jan. 3rd, 2023. Each week covers one thematic area with readings,  
lecture, and discussion. You will complete 3 individual assignments and a final project. You will also share concepts, thoughts, and observations on discussion forums.

The course is scheduled to run asynchronously for the duration of the term. I will post lecture videos on a weekly basis, and post materials on Canvas for discussion throughout the term. Required assignments will be made clear on Canvas and in weekly email communication.

**Grading Scale/Evaluation**

University policies on grading, academic conduct, and other general academic policies apply.  
See: <https://docs.google.com/document/d/1Ev3S-JeQIBauLFIEJupXuJJ2z6Ei2Ps7ofDWj0IACyE/preview>.

All students are required to understand and abide by the Academic Policies of the Information  
School and the UW Student Conduct Code.

Note: Plagiarism is serious academic misconduct. In the Code, plagiarism is defined as:  
the submission or presentation of someone else's words, composition, research, or expressed  
ideas, whether published or unpublished, without attribution. Plagiarism includes, but is not limited  
to the use, by paraphrase or direct quotation, of the published or unpublished work of another  
person without full and clear acknowledgment; or the unacknowledged use of materials prepared  
by another person or acquired from an entity engaging in the selling of term papers or other  
academic materials.

Please see this link for further details: <https://grad.uw.edu/policies-procedures/graduate-school-memoranda/memo-19-grading-system-for-graduate-students/>

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| **Assignment** | **Points Possible** |
| Assignment #1 - “Data in Society” – Due at end of Week 2 | 20 |
| Assignment #2 - “Data Curation Principles” – Discussion posts | 20 |
| Assignment #3 - “Professional Scenarios” – Discussion posts | 20 |
| Other class message board participation – Questions, replies, pointers, etc. | 10 |
| Final Project – Curating a Data Set | |
| * Metadata profile – Due at end of Week 4 | 30 |
| * Repository profile – Due at end of Week 6 | 30 |
| * Final project – First draft due at end of Week 8. Final draft due 3/14. | 70 |
| **Total Points Possible** | **200** |

**Late and Incomplete Policy:**

With the ongoing Covid-19 pandemic, this continues to be an unpredictable time, so points will not be taken off for late assignments. However, the Final Project components are intended to build on each other as a series, and there are multiple intermediate steps built in where you can get feedback on drafts. Thus, I encourage you to submit assignments on time so that you can incorporate preliminary feedback into your Final Project. If medical or other personal issues come up during the term that require you to submit late assignments, please let me know. Course incompletes are strongly discouraged but may be given under university policy with instructor recommendation.

**General Resources on Data Management and Curation (not required, but may be useful)**

* Briney, K. (2015). *Data Management for Researchers: Organize, Maintain and Share your Data for Research Success*. Exeter, UK: Pelagic Publishing. <http://www.pelagicpublishing.com/data-management-for-researchers.html>
* Briney, K.A., Coates, H., & Goben, A. (2020). Foundational Practices of Research Data Management. *Research Ideas and Outcomes*, 6: e56508. <https://doi.org/10.3897/rio.6.e56508>
* *Data Management Training Clearinghouse -* <https://dmtclearinghouse.esipfed.org/>
* *DataQ* - A collaborative platform for answering research data questions in academic libraries. <http://researchdataq.org/>
* Demgenski, Robert, Karcher, Sebastian, Kirilova, Dessi, & Weber, Nic. (2021). *QDR Curation Handbook (1.0).* Qualitative Data Repository. <https://doi.org/10.5281/zenodo.4672678>
* Goben, A. & Raszewski, R. (2015). Research Data Management Self-Education for Librarians: A Webliography. *Issues in Science and Technology Librarianship*, Fall 2015. <https://doi.org/10.5062/F4348HCK>
* Goodman, A., et al. (2014). Ten simple rules for the care and feeding of scientific data. *PLoS Computational Biology*, 10(4): e1003542. <http://dx.doi.org/10.1371/journal.pcbi.1003542>
* Johnston, L.R. (2017). Curating Research Data. Association of College and Research Libraries.
  + [Volume 1 Practical Strategies for Your Digital Repository](http://www.ala.org/acrl/sites/ala.org.acrl/files/content/publications/booksanddigitalresources/digital/9780838988596_crd_v1_OA.pdf) (PDF)
  + [Volume 2 A Handbook of Current Practice](http://www.ala.org/acrl/sites/ala.org.acrl/files/content/publications/booksanddigitalresources/digital/9780838988633_crd_v2_OA.pdf) (PDF)
* Lewis, C. (2022). *A Curated Collection of Data Management Resources*. <https://cghlewis.com/blog/data_mgmt_resources/>
* Strasser, C., Cook, R., Michener, W., & Budden, A. (2012). *Primer on Data Management: What you always wanted to know.* DataONE. <https://doi.org/doi:10.5060/D2251G48>.
* White, E.P., Baldridge E., Brym, Z.T., Locey, K.J., McGlinn, D.J. & Supp, S.R. (2013). Nine simple ways to make it easier to (re)use your data. *Ideas in Ecology and Evolution*, 6(2): 1–10. <https://doi.org/10.4033/iee.2013.6b.6.f>

**COURSE SCHEDULE & READINGS**

**WEEK 1 – Jan 3-6, 2023 - Overview of Data Curation**

*Topics discussed* – Why data curation why now, data life cycle model

*Required Readings:*

Rosenbaum, S. (2013). Curate or be curated: The coming age of the curation economy. *Huffington Post*. <http://www.huffingtonpost.com/steve-rosenbaum/curate-or-be-curated-the_b_4093567.html>

Holdren, J.P. (2013). *Memorandum for the Heads of Executive Departments and Agencies: Increasing Access to the Results of Federally Funded Scientific Research*. Wash., D.C.: Executive Office of the President, Office of Science and Technology Policy, Feb. 22, 2013. <https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/ostp_public_access_memo_2013.pdf>

Nelson, A. (2022). *Ensuring Free, Immediate, and Equitable Access to Federally Funded Research.* Memorandum for the Heads of Executive Departments and Agencies. US Office of Science and Technology Policy, Aug. 25, 2022. <https://www.whitehouse.gov/wp-content/uploads/2022/08/08-2022-OSTP-Public-Access-Memo.pdf>

*Optional Readings:*

Christensen-Dalsgaard, B., et al. (2012). *Ten recommendations for libraries to get started with research data management*. Final report of the LIBER working group on E-Science / Research Data Management. <https://www.fosteropenscience.eu/content/ten-recommendations-libraries-get-started-research-data-management>

Uhlir, P.F. (2010). Information gulags, intellectual straightjackets, and memory holes: Three principles to guide the preservation of scientific data. *Data Science Journal*, 9, pp. ES1–ES5. <https://doi.org/10.2481/dsj.Essay-001-Uhlir>

**WEEK 2 – Jan 9-13, 2023 - Understanding Data within Science and Society**

*Topics discussed:* What are data? – Definitions, conceptualizations, and understandings of data

*Required Readings:*

Borgman, C.L. (2015). What are data? [Chapter 2 from *Big Data, Little Data, No Data*: *Scholarship in the Networked World*. Cambridge, MA: MIT Press.]

King, John L. (2013). *Public Access to Federally-Supported Research and Development Data and Publications* [video]. Presentation at National Academies Public Comment Meeting concerning Public Access to Federally Supported R&D Data. <http://sites.nationalacademies.org/DBASSE/DBASSE_083053#.UZaVhcpI3f1> [scroll to the bottom of the page to find the King video]

[Read the Executive Summary and Chapter 2] *Long-Lived Digital Data Collections: Enabling Research and Education in the 21st Century*. (2005). Washington, D.C.: National Science Foundation, National Science Board. <http://www.nsf.gov/pubs/2005/nsb0540/>

Renear, A. H., Sacchi, S., & Wickett, K. M. (2010). Definitions of Dataset in the Scientific and

Technical Literature. *ASIST 2010*. *Presented at the American Society for Information*

*Science and Technology,* Pittsburgh, PA. <https://doi.org/10.1002/meet.14504701240>

Salo, D. (2010). Retooling Libraries for the Data Challenge. *Ariadne*, Issue 64. <http://www.ariadne.ac.uk/issue64/salo>

*Optional Readings:*

Furner J. (2016). “Data”: The data. In: Kelly M., Bielby J. (eds) *Information Cultures in the Digital Age*. Wiesbaden: Springer. <https://doi.org/10.1007/978-3-658-14681-8_17>

MIT Press Blog. (April 24, 2015). Five Minutes with Christine Borgman [author of *Big Data, Little Data, No Data: Scholarship in the Networked World*]. <http://mitpress.mit.edu/blog/five-minutes-christine-borgman>

Padilla, T. (2016). Humanities data in the library: Integrity, form, access. D-Lib Magazine, 22(3/4). <https://doi.org/10.1045/march2016-padilla>

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

**WEEK 3 – Jan 16-20, 2023 - Data Use, Sharing, and Reuse**

*Topics discussed:* Data sharing and reuse practices, impediments, and incentives

*Required Readings:*

Borgman, C.L. (2012). The conundrum of sharing research data. *Journal of the American Society for Information Science & Technology,* 63(6): 1059-1078. <https://doi.org/10.1002/asi.22634>

[NOTE: READ PART 1 ONLY, PAGES 3-32] Fienberg, S.E., Martin, M.E., & Straf, M.L. (Eds). (1985). Part I: Report of the Committee on National Statistics. In *Sharing Research Data*. Washington, D.C.: National Academy Press. <http://www.nap.edu/catalog/2033/sharing-research-data>

Gomes, D. G. E., et al. (2022). Why don’t we share data and code? Perceived barriers and benefits to public archiving practices. *Proceedings of the Royal Society B: Biological Sciences*, 289(1987): 20221113. <https://doi.org/10.1098/rspb.2022.1113>

Hanson, K., Surkis, A., & Yacobucci, K. (2012). Data Sharing and Management Snafu in 3 Short Acts [video]. <http://www.youtube.com/watch?v=N2zK3sAtr-4>

*Optional Readings:*

Crane, G. R. (2006). What do you do with a million books? *D-Lib Magazine*, 12(3). <http://www.dlib.org/dlib/march06/crane/03crane.html>

LaFlamme, M., Poetz, M., & Spichtinger, D. (2022) Seeing oneself as a data reuser: How subjectification activates the drivers of data reuse in science. *PLoS ONE* 17(8): e0272153. <https://doi.org/10.1371/journal.pone.0272153>

Pienta, A.M., Alter, G., & Lyle, L. (2010). The enduring value of social science research: The use and reuse of primary research data. Presented at the *BRICK, DIME, STRIKE Workshop, The Organisation, Economics, and Policy of Scientific Research*, Turin, Italy, April 23-24, 2010. <http://hdl.handle.net/2027.42/78307>

Tenopir, C., et al. (2015). Research Data Services in Academic Libraries: Data Intensive Roles for the Future? *Journal of eScience Librarianship* 4(2): e1085. <https://doi.org/10.7191/jeslib.2015.1085>

Wallis, J.C., Rolando, E., & Borgman, C.L. (2013). If We Share Data, Will Anyone Use Them? Data Sharing and Reuse in the Long Tail of Science and Technology. *PLoS ONE,* 8(7): e67332. <https://doi.org/10.1371/journal.pone.0067332>

Zuiderwijk, A., Shinde, R., Jeng, W. (2020). What drives and inhibits researchers to share and use open research data? A systematic literature review to analyze factors influencing open research data adoption. *PLoS ONE,* 15(9): e0239283.  <https://doi.org/10.1371/journal.pone.0239283>

**WEEK 4 – Jan 23-27, 2023 – Metadata and Standards**

*Topics discussed:* Metadata creation and use, principles and practices, standards

*Required Readings:*

Cargill, C.F. (2011). Why standardization efforts fail. *Journal of Electronic Publishing*, 14(1). <https://doi.org/10.3998/3336451.0014.103>

Mayernik, M.S. (2020). Metadata. In B. Hjørland & C. Gnoli (Eds), *Encyclopedia of Knowledge Organization*. International Society for Knowledge Organization. <https://www.isko.org/cyclo/metadata>

Michener, W.K., Brunt, J.W., Helly, J.J., Kirchner, T.B., & Stafford, S.G. (1997).

Nongeospatial metadata for the ecological sciences. *Ecological Applications*, 7(1): 330-342. [https://doi.org/10.1890/1051-0761(1997)007[0330:NMFTES]2.0.CO;2](https://doi.org/10.1890/1051-0761(1997)007%5b0330:NMFTES%5d2.0.CO;2)

Tenenbaum, J. D., Sansone, S.-A., & Haendel, M. (2013). A sea of standards for omics data: Sink or swim? *Journal of the American Medical Informatics Association*. <http://doi.org/10.1136/amiajnl-2013-002066>

*Optional Readings:*

Baca, M. (Ed.). (2008). *Introduction to Metadata: Online Edition, Version 3.0.* Los Angeles, CA: Getty Publications. <http://www.getty.edu/research/publications/electronic_publications/intrometadata/>

Greenberg, J. (2005). Understanding metadata and metadata schemes. *Cataloging &*

*Classification Quarterly*, 40(3): 17-36. <https://doi.org/doi:10.1300/J104v40n03_02>

Vardigan, M., Heus, P., & Thomas, W. (2008). Data documentation initiative: Toward a standard for the social sciences. *International Journal of Digital Curation*, 3(1): 107–113. <https://doi.org/10.2218/ijdc.v3i1.45>

Willis, C., Greenberg, J., & White, H. (2012). Analysis and synthesis of metadata goals for scientific data. *Journal of the American Society for Information Science & Technology*, 63(8): 1505-1520. <https://doi.org/10.1002/asi.22683>

*Resources:*

Digital Curation Centre. (2013). *Disciplinary Metadata.* <http://www.dcc.ac.uk/resources/metadata-standards>

Riley, J. (2010). *Seeing Standards: A Visualization of the Metadata Universe.* <http://jennriley.com/metadatamap/>

**WEEK 5 – Jan 30 – Feb 3, 2023 - Data Archives and Repositories**

*Topics discussed:* Data repository types, roles, and functions

*Required Readings:*

Choudhury, G.S. (2012). *Data Conservancy Stack Model for Data Management* [video]. Council on Library and Information Resources (CLIR). <https://www.youtube.com/watch?v=F6iYXNvCRO4&feature=plcp>

Fallaw, C., Dunham, E., Wickes, E., Strong, D., Stein, A., Zhang, Q., … & Imker, H. J. (2016). Overly honest data repository development. *Code4Lib*, 34. <https://journal.code4lib.org/articles/11980>

[Scanned PDF will be available in Canvas] Gurtz, M.E. (1986). Development of a Research Data Management System. In W.K. Michener (Ed.), *Research Data Management in the Ecological Sciences* (pp. 23-38). Columbia, SC: University of South Carolina Press.

Lee, C.A. (2009). Open Archival Information System (OAIS) Reference Model. In

*Encyclopedia of Library and Information Sciences, Third Edition*, edited by M.J. Bates

and M. Niles Maack, 4020‐4030. Boca Raton, FL: CRC Press. <http://www.ils.unc.edu/callee/p4020-lee.pdf>

*Optional Readings:*

DataCragin, M. H., Palmer, C. L., Carlson, J. R., & Witt, M. (2010). Data sharing, small science and institutional repositories. Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences, 368(1926): 4023–4038. <https://doi.org/10.1098/rsta.2010.0165>

Pepler, P. & Callaghan, S. (2015). Twenty Years of Data Management in the British Atmospheric Data Centre. International Journal of Digital Curation, 10(2): 23-32. <https://doi.org/10.2218/ijdc.v10i2.379>

Mayernik, M.S., Choudhury, G.S., DiLauro, T., Metsger, E., Pralle, B., Rippin, M., & Duerr, R. (2012). The Data Conservancy Instance: Infrastructure and Organizational Services for Research Data Curation. *D-Lib Magazine,* 18(9/10). <https://doi.org/10.1045/september2012-mayernik>

Witt, M. (2012). **Co-designing, co-developing, and co-implementing an institutional data repository service**. Journal of Library Administration, 52(2). <https://doi.org/10.1080/01930826.2012.655607>

Yakel, E., Faniel, I., Kriesberg, A., & Yoon, A. (2013). Trust in Digital Repositories. *International Journal of Digital Curation*, 8(1). <https://doi.org/10.2218/ijdc.v8i1.251>

*Resources:*

Consultative Committee for Space Data Systems (CCSDS). (2012). *Reference Model for an Open Archival Information System (OAIS)*. Recommendation for space data system standards, CCSDS 650.0-M-2. <http://public.ccsds.org/publications/archive/650x0m2.pdf>

Generalist Repository Comparison Chart - <https://doi.org/10.5281/zenodo.3946719>

Re3data – searchable registry of research data repositories: <http://www.re3data.org/>

**WEEK 6 – Feb 6-10, 2023 - Data Publication, Citation, and Identification**

*Topics discussed:* Persistent identifiers, data publication and citation initiatives and issues

*Required Readings:*

Duerr, R., et al. (2011). On the utility of identification schemes for digital earth science data: an assessment and recommendations. *Earth Science Informatics*, 1-22. <https://doi.org/10.1007/s12145-011-0083-6>

Fenner, M., Crosas, M., Grethe, J. S., Kennedy, D., Hermjakob, H., Rocca-Serra, P., Durand, G., Berjon, R., Karcher, S., Martone, M., & Clark, T. (2019). A data citation roadmap for scholarly data repositories. *Scientific Data*, 6(1). <https://doi.org/10.1038/s41597-019-0031-8>

White, H. D. (1982). Citation analysis of data file use. *Library Trends*, 30: 467–477. <http://www.ideals.illinois.edu/bitstream/handle/2142/7222/librarytrendsv30i3l_opt.pdf?sequence=1>

Wynholds, L. (2011). Linking to Scientific Data: Identity Problems of Unruly and Poorly Bounded Digital Objects. *International Journal of Digital Curation*, 6(1). <https://doi.org/10.2218/ijdc.v6i1.183>

*Optional Readings:*

Altman, M. & Crosas, M. (2013). The Evolution of Data Citation: From Principles to Implementation. *IASSIST Quarterly*, 37(1). <https://iassistquarterly.com/public/pdfs/iqvol371_4_altman.pdf>

Klein, M. & Balakireva, L. (2020). On the Persistence of Persistent Identifiers of the Scholarly Web. In *Digital Libraries for Open Knowledge* (pp. 102–115). Springer International Publishing. <https://doi.org/10.1007/978-3-030-54956-5_8>

Mayernik, M.S. (2013). *Bridging data lifecycles: Tracking data use via data citations workshop report.* NCAR Technical Note, NCAR/TN-494+PROC. Boulder, CO: National Center for Atmospheric Research. <https://doi.org/10.5065/D6PZ56TX>

Mayernik, M. S. (2018). Scholarly resource linking: Building out a “relationship life cycle.” Proceedings of the Association for Information Science and Technology, 55(1), 337–346. <https://doi.org/10.1002/pra2.2018.14505501037>

Parsons, M.A., Duerr, R.E. & Jones, M.B. (2019). The History and Future of Data Citation in Practice. *Data Science Journal*, 18(1), p.52. <https://doi.org/10.5334/dsj-2019-052>

Parsons, M. & Fox, P. (2013). Is data publication the right metaphor? *Data Science Journal*, 12: WDS32-WDS46. <https://doi.org/10.2481/dsj.WDS-042>

*Resources:*

Ball, A. & Duke, M. (2011). *How to Cite Datasets and Link to Publications*. DCC How - to Guides. Edinburgh: Digital Curation Centre. <https://www.dcc.ac.uk/guidance/how-guides/cite-datasets>

ESIP Data Preservation and Stewardship Committee. (2019). Data Citation Guidelines for Earth Science Data. Ver. 2. Earth Science Information Partners. <https://doi.org/10.6084/m9.figshare.8441816>

# **Inter-university Consortium for Political and Social Research **(****ICPSR). (2013). *Citing Data.*

<http://www.icpsr.umich.edu/icpsrweb/content/datamanagement/citations.html>

**WEEK 7 – Jan 13-17, 2023 - Persistence & Long-Term Preservation**

*Topics discussed:* Digital preservation, long-term perspectives, data archiving workflows

*Required Readings:*

Blumenthal, K., Griesinger, P., Kim, J.Y., Peltzman, S., & Steeves, V. (2020). What’s wrong with digital stewardship: Evaluating the organization of digital preservation programs from practitioners’ perspectives. *Journal of Contemporary Archival Studies*: 7(13). <https://elischolar.library.yale.edu/jcas/vol7/iss1/13>

Gutmann, M., Schürer, K., Donakowski, D., & Beedham, H. (2004). The selection, appraisal, and retention of social science data. *Data Science Journal*, 3(30): 209–221. <https://doi.org/10.2481/dsj.3.209>

Hart, E., et al. (2016). Ten simple rules for digital data storage. *PeerJ Preprints*, 4: e1448v2. <https://doi.org/10.7287/peerj.preprints.1448v2>

Mannheimer, S., Yoon, A., Greenberg, J., Feinstein, E., & Scherle, R. (2014). A balancing act: The ideal and the realistic in developing Dryad’s preservation policy. First Monday, 19(8). <https://doi.org/10.5210/fm.v19i8.5415>

[READ pg. 5-10 & pg. 40-44] Waters, D. & Garrett, J. (1996). *Preserving Digital Information.* Report of the Task Force on Archiving of Digital Information. Washington, DC: CLIR. <https://www.clir.org/pubs/reports/pub63/>

*Optional Readings:*

Griffin, R.E. (2015). When are Old Data New Data? *GeoResJ*, 6: 92–97. https://doi.org/10.1016/j.grj.2015.02.004

Humphrey, C. (2006). The Preservation of Research Data in a Postmodern Culture. *IASSIST Quarterly*, 29(1): 24-25. <https://doi.org/10.29173/iq601>

Mayernik, M.S., Breseman, K., Downs, R.R., Duerr, R., Garretson, A., Hou, C.-Y., EDGI, and Earth Science Information Partners (ESIP) Data Stewardship Committee. (2020). Risk Assessment for Scientific Data. *Data Science Journal*, 19(1), p.10. https://doi.org/10.5334/dsj-2020-010

Walters, T. & Skinner, K. (2011). *New Roles for New Times: Digital Curation for Preservation*. Washington, DC: Association of Research Libraries. <https://www.arl.org/resources/new-roles-for-new-times-digital-curation-for-preservation/>

*Resources:*

Library of Congress. *National Digital Information Infrastructure and Preservation Program.*

<http://www.digitalpreservation.gov/>

**WEEK 8 – Feb 20-24, 2023 - Data Policy**

FIRST DRAFT OF FINAL PROJECT DUE

*Topics discussed:* Open data, data policies, data management plans, data curation economics

*Required Readings:*

[Read one of the data policies included in this page] Data Sharing Requirements by Federal Agency - <https://sparcopen.org/our-work/research-data-sharing-policy-initiative/funder-policies/>

[Read Chapter 4 only] CODATA & National Research Council. (1997). Data from publicly funded research: The economic perspective. In *Bits of Power: Issues in Global Access to Scientific Data* (pp. 110-131). Washington, DC: National Academy Press. <https://doi.org/10.17226/5504>

Okamoto, K. (2016). Introducing Open Government Data. *The Reference Librarian*, 58(2): 111–123. <https://doi.org/10.1080/02763877.2016.1199005>

Pomerantz, J. & Peek, R. (2016). Fifty shades of open. *First Monday,* 21(5). <https://doi.org/10.5210/fm.v21i5.6360>

Samuel, S.M., Grochowski, P.F., Lalwani, L.N. & Carlson, J. (2015). Analyzing data management plans: Where librarians can make a difference. *American Society for Engineering Education*. <https://peer.asee.org/23554>

*Optional Readings:*

Berman, F. & Cerf, V. (2013). Who Will Pay for Public Access to Research Data? *Science*, 341(6146): 616–617. <https://doi.org/10.1126/science.1241625>

Miksa, T., Simms, S., Mietchen, D., & Jones, S. (2019). Ten principles for machine-actionable data management plans. *PLOS Computational Biology*, 15(3): e1006750. <https://doi.org/10.1371/journal.pcbi.1006750>

Parham, S. W., Carlson, J., Hswe, P., Westra, B., & Whitmire, A. (2016). Using data management plans to explore variability in research data management practices across domains. *International Journal of Digital Curation*, 11(1): 53–67. <https://doi.org/10.2218/ijdc.v11i1.423>

*Resources:*

List of Federal Agency Public Access plans - <http://bit.ly/FedOASummary>

University library pages summarizing government agency Open Access & Open Data plans:

* <https://library.osu.edu/researchcommons/2015/04/27/3610/>
* <http://researchdata.wisc.edu/resources/federal-funding-requirements/>
* <https://www.lib.umn.edu/datamanagement/funding>

University library pages providing guidance on writing a data management plan:

* <https://library.stanford.edu/research/data-management-services/data-management-plans>
* <https://data.library.arizona.edu/data-management-plans>
* <https://library.ucsd.edu/lpw-staging/research-and-collections/data-curation/data-management/data-management-plan.html>

**WEEK 9 – Feb 27- Mar 3, 2023 – Data Ethics**

*Topics discussed:* Data ethics, ownership, privacy, copyright & licensing

*Required Readings:*

Leh, A. (2000). Problems of Archiving Oral History Interviews. The Example of the Archive "German Memory". *Forum: Qualitative Social Research*, 1(3). <http://www.qualitative-research.net/index.php/fqs/article/view/1025>

Oxenham, S. (2016). Legal confusion threatens to slow data science. *Nature*, 536(7614), 16–17. <https://doi.org/10.1038/536016a>

[PDF available via Canvas] Rodriguez-Lonebear, D. (2016). Building a data revolution in Indian country. In T. Kukutai & J. Taylor (Eds.), *Indigenous Data Sovereignty: Toward an Agenda* (pp. 253-272). Australian National University Press.

Weber, N. & Locke, B. (2022). Ethics of Open Data. arXiv:2205.10402. <https://doi.org/10.48550/arXiv.2205.10402>

*Optional Readings:*

Carroll, M.W. (2015). Sharing Research Data and Intellectual Property Law: A Primer. *PLoS Biology*, 13(8): e1002235. <https://doi.org/10.1371/journal.pbio.1002235>

Tyler, A.R.B. (2020). Facilitating Access to Restricted Data. *International Journal of Digital Curation*, 15(1): 16. <https://doi.org/10.2218/ijdc.v15i1.602>

Wallis, J.C. & Borgman, C.L. (2011). Who is responsible for data? An exploratory study of data authorship, ownership, and responsibility. *Proceedings of the American Society for Information Science and Technology*, 48(1): 1-10. <https://doi.org/10.1002/meet.2011.14504801188>

Wilbanks, J. (2013). Licence restrictions: A fool’s errand. *Nature*, 495(7442): 440–441. <https://doi.org/10.1038/495440a> [See also the comments following the article.]

Wu, F.T. (2012). Defining Privacy and Utility in Data Sets. *2012 TRPC*. <https://doi.org/10.2139/ssrn.2031808>

*Resources:*

CARE Principles. <https://www.gida-global.org/care>

Copyright law of the United States. <http://www.copyright.gov/title17/>

Creative Commons Licenses. <http://creativecommons.org/licenses/>

Cornell University. (2013). *Copyright Term and the Public Domain in the United States.* <http://copyright.cornell.edu/resources/publicdomain.cfm>

**WEEK 10 – Mar 6-10, 2023 - The Role of Libraries in Data Curation**

*Topics discussed:* Library data curation services, professionalization, institutional trends

*Required Readings:*

Johnston, L.R. & Coburn, L. (2020). Data Sharing Readiness in Academic Institutions. Data Curation Network. Retrieved from the University of Minnesota Digital Conservancy. <https://hdl.handle.net/11299/211358>

*23 Things: Libraries for Research Data*. (2015). Research Data Alliance, United States.

<https://rd-alliance.org/system/files/documents/23Things_Libraries_For_Data_Management.pdf>

Goben, A. & Raszewski, R. (2015). The data life cycle applied to our own data. *Journal of the Medical Library Association*, 103(1): 40–44. <https://doi.org/10.3163/1536-5050.103.1.008>

Purdue Libraries (2018). Purdue University Research Repository (PURR) [video]. <https://www.youtube.com/watch?v=GhOlC3-NqLU>

University of California Libraries. (2016). Research Data Matters[video]*.* <https://www.youtube.com/watch?v=Lr722k7NyGU>

*Optional Readings:*

Carlson, J. (2012). Demystifying the Data Interview: Developing a Foundation for Reference Librarians to Talk with Researchers about their Data. *Reference Services Review*, 40(1): 7-23. <http://docs.lib.purdue.edu/lib_research/153/>

Petters, J., Hilal, A. & Ogier, A. (2022). An Assessment of Research Data Services Through Client Interaction Records. *Journal of Librarianship and Scholarly Communication*, 10(1). <https://doi.org/10.31274/jlsc.14439>