

Data Management Plans – UM Library Guide & Services

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Background

In May 2010, the National Science Foundation announced that all grant proposals will be required to have a data management plan beginning in January 2011. This new element requires researchers at UM to become familiar with the data management plan (DMP) requirements of their directorate and develop a DMP for each proposal they submit.

Data Curation - Why should you care?

"By learning how to preserve and share digital materials so others can effectively reuse them, you will maximise the impact of your research" (Digital Curation Centre)

Data that you generate with or for your research should be available to other researchers to help verify and advance your work. By becoming a good steward of your data, you will have a framework in place to help you keep track of your data, your data will be citable, you can help your graduate students achieve their goals quicker, and you will be helping future researchers in your field of study.

Resources

DMP Guide A guide was developed based on a previous template document and includes updated examples and links to resources. This guide goes through each required element of a DMP according to the Engineering Directorate.

Data Management Plan Guide (NSF ENG) TAGS: DATA, DATA-SHARING, DATA CURATION, DATA MANAGEMENT, DMP, NSF

This guide will provide guidance & resources for writing a Data Management Plan, based on NSF ENG documentation.

Last Updated: Oct 24, 2013 | URL: <http://guides.lib.umich.edu/engin-dmp> | [Print Guide](#)

Getting Started | Roles & Responsibilities | Expected Data | Period of Retention | Formats | Dissemination | Storage & Preservation

Getting Started [Print Page](#) Search: [] This Guide [] Search []

Other DMP Templates

These are links to templates created for researchers at other colleges & universities.

- Columbia University
- University of Virginia
- University of Illinois - Engineering (Word Document)

Comments (0)

Resources

- Data Management for NSF Engineering Directorate
- Managing and Sharing Data: A Best Practice Guide for Researchers by Van den Eynden, V., Corti, L., Woolard, M., Bishop, L. & Horton, L. (2011).
- UK Data Archive DMP Checklist
- Digital Curation Center (UK) DMP Checklist (PDF)
- Data Management Plan Template for UM College of Engineering (Out of date) Extended version of the information in this guide.

Tools

- DMPTool: A group of major research institutions has partnered to create a flexible online tool to help researchers generate data management plans.

How to Use This Guide

Use the tabs on this guide to view summaries, resources, and helpful questions to consider for each section of your DMP.

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Data Life Cycle

Analyze → Plan → Collect → Describe → Preserve → Discover → Integrate → Assure

Image from DataONE

Library Contact

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Links:
[Profile & Guides](#)

Subjects:
Engineering, Space Sciences,
Atmospheric & Oceanic Sciences,
Electrical Engineering, Computer Science & Engineering

Library Contact

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NSF Data Management Plan Requirement

Investigators are expected to share with other researchers, at no more than incremental cost and within a reasonable time, the primary data, samples, physical collections and other supporting materials created or gathered in the course of work under NSF grants. Grantees are expected to encourage and facilitate such sharing. See [Award & Administration Guide \(AAG\) Chapter VI.D.4](#).

Proposals submitted or due on or after January 18, 2011, must include a supplementary document of no more than two pages labeled "Data Management Plan". This supplementary document should describe how the proposal will conform to NSF policy on the dissemination and sharing of research results. See [Grant Proposal Guide \(GPG\) Chapter II.C.2](#) for full policy implementation.

This resource is intended to be used for preparing College of Engineering ENG proposals. Requirements are based on [NSF ENG](#) Documentation.

Services in Development

Data Management Plan Consultation The Engineering Librarians will be developing and rolling out a new service to assist researchers with submitting the best DMPs possible. The Librarians will read your DMP and provide feedback based on the ENG Directorate guidance.

Training & Workshops In addition to one-on-one assistance with DMPs, the Library will also offer workshops related to data management, data stewardship, and best practices.

Boilerplate Language Certain parts of a data management plan may be well suited to re-using language; for example, Deep Blue is UM's institutional repository and standard language could be developed to describe the repository in a way that meets the DMP requirements.

UM Data Repository The Library is developing a data repository that will meet many researchers' needs for fulfilling the NSF data sharing requirement.

Storage & Preservation [Print Page](#) Search: [] This Guide [] Search []

Examples

Please note that these DMP excerpts are copyrighted by their respective authors.

[Show/Hide Example 1](#)

Preferred:

"As previously mentioned, data and codes developed during this research will be stored on both the PI's groups' local servers and on the campus servers. The campus servers are automatically backed up every day. Data generated at the University of Michigan will be stored in a repository called Deep Blue, while data generated at the University of Michigan will be stored in a repository called _____ providing 1000b (expandable)..."

Mentioning both short-term and long-term storage is good practice, and these are reliable storage options with automatic back-ups.

Less Developed:

All data will be available at request immediately after the scientific results are published and will be stored at least another five years on magnetic and optical storage devices (hard disks, CDs, DVDs). Optical storage devices will serve the purpose of the Disaster Recovery Plan."

Optical storage media are not sufficiently reliable for long-term archival storage.

[Show/Hide Example 2](#)

[Show/Hide Example 3](#)

Comments (0)

Resources

- Storage Services from UM IT Services: List of storage options available at University of Michigan.
- ITS Storage Services: Comparison of storage services available through University of Michigan ITS.
- Storage Solutions Summary Chart: Chart from University of Michigan ITS.
- Dataverse: Dataverse is a searchable catalog / registry / directory / bibliography of research data repositories. Use this to find an appropriate disciplinary repository.
- Data Repositories: A list of repositories and databases for open data from Simmons College.
- Storing Your Data: by UK Data Archive

Summary

Once data are ready to be archived and shared they will most likely need to be transferred to a repository or data center with a commitment to long-term curation. Consider both backup and archival strategies as part of your data management planning process.

Your first choice for long-term data preservation should be a disciplinary repository serving a relevant area of research. If no such repository exists, consider our institutional repository, Deep Blue. Persistent archiving in a curated disciplinary or institutional repository is the preferred solution for long-term data preservation. If there are no applicable repositories, describe how you will keep the data accessible for its expected useful lifespan.

Two ways to approach finding a repository (please note that these are options for you to investigate further):

What type of data do you have?

- Software code: GitHub, Bitbucket, codeblue
- Images: figshare, Deep Blue
- Video: figshare, Deep Blue
- Ascii, Shapfiles, Learning Objects: Deep Blue

Does a subject repository exist for your research area? Search Databib for a relevant repository.

Yes → Does your data meet the repository's requirements? → Yes → Deposit!

No → Deep Blue may be a good option. Contact them to discuss your options.

Librarians The Engineering Librarians at the Art, Architecture & Engineering Library have studied the Engineering Directorate requirements and have also read through numerous DMPs that have recently been submitted. Their expertise can aid the development of a comprehensive data management plan for your research proposal.



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