Handout “Introduction to Research Data Management”

What is it about?

It’s about classifying the terms “research data” and “research data management” as well as the benefits of good research data management and how this relates to good scientific practice.

Why is this important?

Research data management supports researchers in their own handling of their data and helps to ensure the traceability of their data for themselves during the research process and for other researchers after the research process has ended. It contributes to long-term usability through good documentation and the associated quality assurance and transparency.

In the long run, successful research data management saves time and resources, as (a) proper documentation of the research process promotes reproducibility and facilitates validation of research results in case of allegations, (b) data loss is minimised via the implementation of regular backups, (c) the use of standards leads to the avoidance of errors, etc.

Furthermore, publishing well-documented and reusable datasets leads to an increase in visibility and reputation for you as a researcher, as increasingly not only scientific articles but also data publications are appreciated with ever increasing tendency.

In addition, the DFG's “Guidelines for Safeguarding Good Research Practice” published in 2019 also set requirements for working with research data that must be met for further funding.

How do I implement this?

The following topics, among others, are relevant for successful research data management and are also part of this self-study unit:

1. Knowledge of the research data life cycle and what tasks need to be done in the different phases of the life cycle (Chapter 2).
2. Preparation of a data management plan (Chapter 3)
3. Creation of metadata and use of metadata standards (Chapter 4)
4. Preparation of data according to the FAIR principles (Chapter 5)
5. Measures to increase data quality (Chapter 6)
6. Measures regarding data organisation (Chapter 7)
7. Measures for data storage and archiving (Chapter 8)
8. Knowledge of legal, often discipline-specific features in dealing with research data throughout the entire research process (Chapter 9).