

Introduction to Data Management

Online course learning objectives

This course equips learners with an understanding of the different types of data management. Provides learners with the tools and knowledge to manage data effectively, covering the strategies for organizing research data. Supports learners in sharing their data securely and effectively.

This course will help learners to:

- Recognize different types of research data, describe the importance of documenting their research and evaluate why and when to use metadata
- Identify the benefits of data management and the sources of support, applying the best practices for successful data management
- Determine responsibilities for data management in a research team and share data applying the FAIR principles
- Formulate a data management plan and engage with data management planning tools, support and guidance
- Employ the options available to them to safely store their data and recognize the importance of data backups
- Describe what is meant by data integrity, and explain its importance
- Anonymize, encrypt, and destroy sensitive data when required for ethical reasons and describe what is meant by data integrity
- Identify the perks of data sharing, both for personal growth and for advancing ideas and knowledge and protect their data once published and shared, by complying with data protection legislation
- Recognize the difference between copyright, licence, and open access and how to control restrictions on their data

Language: English

Time to complete: 4 hours

Level: Beginner

Instructor: Dr. Alessandra Vigilante

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Online course full syllabus

MODULE ONE: UNDERSTANDING THE DIFFERENT TYPES OF RESEARCH DATA

This module will walk you through the key steps of the data life cycle, with an emphasis on the use of different data types and data documentation, so that you understand how everything fits together.

Topics:

1. Why Use Data Management?
2. Types of Data
3. What is Metadata
4. Creating Metadata Schemes
5. The Data Life Cycle
6. Checkpoint

MODULE TWO: DATA MANAGEMENT PRINCIPLES AND BEST PRACTICE

This module will give an overview of the wider advantages of good data management and the importance of creating a data management plan.

Topics:

1. The Benefits of Data Management
2. Working in a Research Team
3. The FAIR Principles
4. Data Management Plans
5. Checkpoint

MODULE THREE: PLANNING A DATA MANAGEMENT STRATEGY

This module will show you some common data management planning tools that will allow you to start your project with a detailed plan that takes into consideration important issues like storage, backups and ethics.

Topics:

1. Data Management Planning Tools
2. Strategies for Organizing Research Data
3. Tools to Organize Your Data
4. Checkpoint

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MODULE FOUR: ENSURING DATA INTEGRITY AND STORING DATA EFFECTIVELY

In this module, we will look at the different strategies you may use to back up your data safely and efficiently and evaluate where the best place is to store your data, and how to do so ethically.

Topics:

1. Backing Up Data
2. Storing Your Data
3. Data Integrity
4. Checkpoint

MODULE FIVE: THE BENEFITS OF SHARING DATA

This module will explore the value of sharing your data from an institutional, personal and legal perspective.

Topics:

1. The Principle of Sharing Data
2. Protecting Confidentiality
3. Data Ownership
4. Types of Access and Restrictions
5. Checkpoint