Open Science and Research Data Management
6, 7, 15, 16 February 2024

FIRST PART
Introduction to Open Science and Open Access (2 h)
"If I have seen further, it is by standing on the shoulders of Giants", wrote Isaac Newton in a letter to Robert Hooke in 1675. The pursuit of scientific knowledge necessitates collaboration, communication, and exchange. However, why persist with a paradigm from the past that restricts access to knowledge to those who pay for it and limits the researchers' own rights? This module aims to provide an introduction to the problems of scholarly communication and explain the rationale underlying Open Science, illustrate some of its fundamental components such as Open Access, and give insights into key aspects of knowledge dissemination, such as copyright and licensing.

The Institutional Repository IRIS (2 h)
Introduction to the use of the Institutional repository IRIS that collect, preserve and publish in open access the scientific outputs: you will learn how to deposit the research outputs in IRIS and other repository features.

6/02/2024, Sala Azzurra 9:00-13:00 GINA PAVONE, DONATELLA TAMAGNO (Italian)
7/02/2024, Sala Azzurra 9:00-13:00 GINA PAVONE, DONATELLA TAMAGNO (English)

SECOND PART
Research Data Management basics and Introduction to Data Management Plans (4 h)
In this session, we dive into research data management basics. By the end of the session, participants will understand why research data management matters, what are the key stages of the research data lifecycle and the FAIR data principles, and how to actively and consistently manage research data, including how to work with Data Management Plans. The session will be divided into two sections, with one section aimed at participants from natural and experimental sciences and the second section aimed at participants from historical and theoretical disciplines.

15/02/2024, Sala Azzurra 9:00-13:00 EMMA LAZZERI (EXPERIMENTAL researcher)
15/02/2024, Sala degli Stemmi 9:00-13:00 LIISE LEHTSALU (THEORETICAL researcher)

THIRD PART
Hands on Modules on tools, lasting 1 or 2 hours: the students will be able to choose at least one or two courses that allow them to reach 10 hours.

Experimental researcher:
16/02/2024, Aula Bianchi
9:00-11:00 Free Software & Open Source
11:00-12:00 Data Stewardship Wizard
15:00-16:00 EU Survey

Theoretical researcher:
16/02/2024, Sala degli Stemmi
9:00-11:00 Zotero
11:00-12:00 DMP Online

Experimental and Theoretical researcher
16/02/2024, Aula Bianchi
12:00-13:00 Data re-use
14:00-15:00 Zenodo

- **Zotero**, **Sala degli Stemmi, 9:00-11:00 (Giacomo Canepa)**
  The aim of this module is to provide an introduction to a digital tool that is useful and, in some disciplines, necessary for PhD candidates: a reference management software. We will install one of them, Zotero, and learn how to use it for stocking, organising and annotating citations and documentary resources. We will discuss how to build, progressively during the thesis, a bibliography. We will then see how Zotero instantly creates references and bibliographies for any text editor, and directly inside Word, LibreOffice, LateX, and Google Docs. We will conclude by reflecting on how Zotero can help the archiving and sharing of bibliographical references, from an open science perspective [suggested for theoretical researcher].
- **DMP Online**, **Aula Bianchi, 11:00-12:00 (Liise Lehtsalu)**
  This module introduces the participants to DMPOnline, an online tool for preparing Data Management Plans. Participants create an account on DMPOnline and review the main features of DMPOnline. By the end of the module, participants have started their own Data Management Plan in DMPOnline [suggested for theoretical researchers].
- **Data re-use – what to consider**, **Aula Bianchi, 12:00-13:00 (Liise Lehtsalu)**
  This module provides participants with a practical overview of issues related to data reuse. We focus on questions that researchers must consider before re-using existing data in their own research, for example when acquiring data from data banks or data repositories, when using data from digital collections or libraries or when working with historical collections or published (scholarly) works [suggested for experimental and theoretical researchers].
- **Free Software & Open Source**, **Aula Bianchi**, **9:00-11:00 (Alexander Palummo)**
  This module introduces the main aspects of the Ethics of IT through the most significant moments in the history of FreeSoftware and OpenSource Software: the GNU project, Hacker ethics, and the birth and spread of the Internet.

In the course of the discussion, some of the most frequent practical issues will also be addressed: what licence to match OpenData; why do we have to worry about Malware; how to guard against the pitfalls of the Digital Divide, a gap often fueled by seemingly unimportant mistakes (such as failure to respect Netiquette or suboptimal choices of Research Data Management). Concluding remarks will address the connection between planned obsolescence and the Digital Ecological Footprint. [suggested for experimental researchers].

- **Data Stewardship Wizard**, **Aula Bianchi, 11:00-12:00 (Emma Lazzeri)**

  This training module is a deep dive into the Data Stewardship Wizard, a powerful tool facilitating the planning and creation of effective data management plans. Participants will explore the functionalities of the Data Stewardship Wizard, learning to navigate its step-by-step approach to generate data management plans that align with funder requirements and best practices. This session will cover utilizing templates, customizing plans, and ensuring compliance with data management guidelines [suggested for experimental researchers].

- **Zenodo**, **Aula Bianchi, 14:00-15:00 (Emma Lazzeri)**

  This training module is designed to introduce participants to the comprehensive functionalities of Zenodo, an open-access repository for research data. Learn to efficiently store, share, and manage research outputs, including datasets, publications, and more. Participants will discover how to navigate the platform, upload content, apply appropriate metadata, and maximize the visibility of their research, fostering collaboration and compliance with open science practices [suggested for experimental and theoretical researchers].

- **EUSurvey**, **Aula Bianchi, 15:00-16:00 (Emma Lazzeri)**

  This training module is a comprehensive guide to EUSurvey, an intuitive platform for creating, managing, and analyzing surveys within the European Union framework. Participants will delve into the functionalities of EUSurvey, learning to craft effective surveys, collect data securely, and extract meaningful insights through robust analytical tools. This session will cover the platform's features, including customization options, data protection measures, and best practices for creating impactful surveys compliant with EU standards [suggested for applied researchers].