Module 1	**Introduction to Open science (OS)**
Course coordinator	Mariarita de Luca (MdL)
Lecturers	Elena Giglia and MdL
Tutors	Gerardina Cargnelutti, Stefania Cantagalli and Barbara Corzani
Class duration	21 hours
Module description	**Principles:** Open Science is about increased transparency, re-use, participation, cooperation, accountability, and reproducibility for research. It aims to improve the quality and reliability of research through principles like inclusion, fairness, equity, and early sharing. Open Science can be viewed as research simply done properly, and it extends across the Life and Physical Sciences, Engineering, Mathematics, Social Sciences, and Humanities (Open and Responsible Research). **Practices:** Open Science includes changes to the way science is done, including opening access to research publications, data-sharing, open notebooks, transparency in research evaluation, ensuring the reproducibility of research (where possible), transparency in research methods, availability of open-source code, software and infrastructure, with the contribution of citizen science and the accessibility of open educational resources.
Main topics	- Concepts and principles of Open-Science - Policies on Open Science (European Commission, United Nations...) - The European context: Horizon Europe and OS practices - Open Science components: focus on publications (Open Access flavors, early sharing and open peer review - Open Science components: Open Research Data and FAIR principles, open formats, open licensing - FAIR Research Data Management concepts, general tools and techniques - FAIR principles and Data Management Plan structure - European OS platforms: EOSC (European Open Science Cloud) and Dataspaces
Objectives	On successful completion of this module students should have their own understanding on what is Open Science, how to adopt and adapt Open Science practices to different research fields, how to apply FAIR principles in Research Data Management. They will also be able to find documentation and tools to support researchers inOpen Science and FAIR practices.
References	- (OS Training Handbook Introduction · GitBook, 2018, no copyright, contents to be updated) - The Turing way handbook to reproducible, ethical and collaborative data science - Passport for Open Science, 2024 - UNESCO Open Science toolkit - FAIR Principles: Interpretations and Implementation Considerations, 2020