Unige soft skill course available for the STAT PhD program 2025

TITLE	Open Science and Research Data Management (OS&RDM)
Lecturer	Anna Maria Pastorini, SBA UNIGE; Valentina Pasquale, IIT annamp@unige.it valentina.pasquale@iit.it
Duration and Credits	2.5 CFU (tot. 10 hours)
Course description	This training module aims to introduce early-career researchers to the principles of scholarly communication, Open Science and Research Data Management. Students will gain a better understanding of the available research e-infrastructures, tools, and services for Open Access publishing, Research Data Management and FAIR Data. Students will also learn the importance and the transformative potential of Open Science practices in research, especially to improve reproducibility and increase research integrity. They will learn what means to make data FAIR, as required by many funders, including the European Commission, and how to draft a data management plan. Finally, they will have the chance to practice on common tools for Research Data Management, like Data Stewardship Wizard, Zenodo, and Dataverse. **Module 1:** *The transformative potential of Open Science for research (V. Pasquale, A. M. Pastorini)* Definition of Open Science; potential and benefits for different stakeholders. *Scholarly communication (A. M. Pastorini)* What is scholarly communication; the publication cycle and type of publications; peer-review process; bibliometrics (impact factor, h-index, other indicators, bibliometrics limits); citation databases; avoid plagiarism; literature search engines and reference managers. *The management of rights in scholarly communication (A. M. Pastorini)* Intellectual property: trademarks and patents; author's rights and copyright (Italian and European contexts); fair use vs exceptions and limitations to rights; editorial policies: contract and license; open access as an economic model; open licenses for sharing contents and data **Module 2:** *Open access in scholarly communication (A. M. Pastorini)* Overview on open access; open digital repositories and institutional archives; open access journals and bibliometrics; the different business models of open access; cOAlitionS and PlanS; OA policies and regulations (with specific reference to Unige and IIT context). 13 *Author's rights and PhD Thesis (A. M. Pastorini)* Author's rights and PhD Thesis; regulation about PhD Thesis; the submissions of PhD Thesis in the institutional repository (IRIS UniGe); information and support: the OS UniGe website www.openscience.unige.it; open science & RDM support in IIT (*V. Pasquale*). **Module 3** *What is Research Data Management? (V. Pasquale)* Research data management: a definition; Research data lifecycle: from data management planning to sharing. *The Research Data Lifecycle: Plan & fund (V. Pasquale)* Funder requirements; data management planning; support for DMP at IIT. *Hands-on activity: using online tools for data management planning (V. Pasquale)* Students will be asked to draft a data management plan of their PhD project by using online tools (e.g., Data Stewardship Wizard).

	Module 4 *The Research Data Lifecycle: Work with data (V. Pasquale)* Secure storage & backup; tips & tricks: file formats, data organisation, filenaming conventions, version control and "house-keeping" rules; data documentation; electronic lab notebooks. *The Research Data Lifecycle: Preserve & share (V. Pasquale)* FAIR data: how to make your data FAIR; data and metadata standards; digital preservation: repositories, open data licenses, persistent identifiers, how to make your research outputs (data, models, code) citable. *Hands-on activity: share a dataset in a trusted repository (V. Pasquale)* Students will be asked to create a dataset and share it by using a trusted repository (e.g., Zenodo, Dataverse, figshare, etc.)
Course organization	Teaching Methods Frontal lectures, hands-on activities. Exam Description Students will have to take an exam that may consist in a combination of multiple-choice tests and/or practical activities, such as the elaboration of a sample data management plan and/or sharing a research dataset. Assessment Methods Students will be evaluated on the basis of the multiple-choice tests, and/or on the execution of practical activities
Teaching period	Students are invited to contact the reference lecturers to schedule the class.