LECTURE 01

Open Science values and principles

Training Course 1:
Open Science is the new norm

Module 01:
Fundamentals of Open Science

LECTURE 02

FAIR Principles and their role in Open Science

Training Course 1:
Open Science is the new norm

Module 01:
Fundamentals of Open Science

LECTURE 01

Societal and Economic impact of Citizen Science from Galileo to post-truth populism

Training Course 1:
Open Science is the new norm

Module 02:
Open Science and Society

LECTURE 02

Societal Impact of Open Science - Real-life examples

Training Course 1:
Open Science is the new norm

Module 02:
Open Science and Society

LECTURE 01

Open Science: Benefits for scientific progress

Training Course 1:
Open Science is the new norm

Module 03:
Open Science is Essential for Advancing Research and Innovation

LECTURE 02

Open Science in Practice (optional)

Training Course 1:
Open Science is the new norm

Module 03:
Open Science is Essential for Advancing Research and Innovation

LECTURE 01

Closed Science: A Historical Perspective and Negative Consequences

Training Course 1:
Open Science is the new norm

Module 04:
Open Science vs. Closed Science

LECTURE 02

Challenges and Ethical Dilemmas in Closed Science

Training Course 1:
Open Science is the new norm

Module 04:
Open Science vs. Closed Science

LECTURE 03

The Economic Impact of Closed Science vs Open Science

Training Course 1:
Open Science is the new norm

Module 04:
Open Science vs. Closed Science

LECTURE 04

Building a Culture of Openness

Training Course 1:
Open Science is the new norm

Module 04:
Open Science vs. Closed Science

LECTURE 01

Fostering Research Integrity and Reproducibility

Training Course 1:
Open Science is the new norm

Module 05:
Accountability and Transparency in Open Science

LECTURE 01

Overview of the legal regulatory framework on Personal Data, Non-Personal Data and Intellectual Property

Training Course 2:
ELSI and Data Governance

Module 06:
Legal and Ethical Frameworks and Considerations in Open Science

LECTURE 02

Landscaping Ethical Issues in Open Science

Training Course 2:
ELSI and Data Governance

Module 06:
Legal and Ethical Frameworks
and Considerations in Open Science

LECTURE 01

Open Science and Non-personal Data

Training Course 2:
ELSI and Data Governance

Module 07:
Open Science under the EU Data
Regulatory Framework

LECTURE 02

Personal Data in Open Science

Training Course 2:
ELSI and Data Governance

Module 07:
Open Science under the EU Data
Regulatory Framework

ADDITIONAL READING

Guidelines for Writing a Privacy Policy in Research Projects

Training Course 2:
ELSI and Data Governance

Module 07:
Open Science under the EU Data
Regulatory Framework

LECTURE 01

Planning the FAIRification of data

Training Course 2:
ELSI and Data Governance

Module 08:
Data Governance and Legislative
Strategies for FAIR Research

LECTURE 02

Identifying practical "how to" tools to go FAIR

Training Course 2:
ELSI and Data Governance

Module 08:
Data Governance and Legislative
Strategies for FAIR Research

LECTURE 01

Policy, Evidence and Evidence-Informed Decision Making

Training Course 3:
Introduction to Evidence–informed Decision–making

Module 09:
Open Science and Evidence–informed Decision Making

LECTURE 02

Stakeholders involved in Evidence-Informed Decision Making

Training Course 3:
Introduction to Evidence–informed Decision–making

Module 09:
Open Science and Evidence–informed Decision Making

ADDITIONAL READING

Guidelines and Best Practices for Honest Brokers

Training Course 3:
Introduction to Evidence–informed Decision–making

Module 09:
Open Science and Evidence–informed Decision Making

LECTURE 01

Open Science Outputs in Decision-Making

Training Course 2:
ELSI and Data Governance

Module 10:
Evidence–informed decision making – outputs and tools

LECTURE 02

Data Science Algorithms in Practice

Training Course 2:
ELSI and Data Governance

Module 10:
Evidence–informed decision making – outputs and tools

LECTURE 03

Interpreting Statistics for Insights

Training Course 2:
ELSI and Data Governance

Module 10:
Evidence–informed decision making – outputs and tools

LECTURE 01

Open Science Stakeholders

Training Course 4:
Open Science Stakeholders
and Collaboration Strategies

Module 11:
Open Science and its Stakeholders

LECTURE 01

Creating a Collaborative Culture

Training Course 4:
Open Science Stakeholders
and Collaboration Strategies

Module 12:
Collaboration Strategies for Stakeholders

LECTURE 02

Collaboration Impact

Training Course 4:
Open Science Stakeholders
and Collaboration Strategies

Module 12:
Collaboration Strategies for Stakeholders

LECTURE 03

Case studies of successful collaboration on Open Science

Training Course 4:
Open Science Stakeholders
and Collaboration Strategies

Module 12:
Collaboration Strategies for Stakeholders

LECTURE 04

Role of open science in fostering collaboration among researchers, practitioners, and the public

Training Course 4:
Open Science Stakeholders
and Collaboration Strategies

Module 12:
Collaboration Strategies for Stakeholders

LECTURE 05

Communicating Uncertainty

Training Course 4:
Open Science Stakeholders
and Collaboration Strategies

Module 12:
Collaboration Strategies for Stakeholders

LECTURE 06

Data Visualisation and Storytelling

Training Course 4:
Open Science Stakeholders and Collaboration Strategies

Module 12:
Collaboration Strategies for Stakeholders

LECTURE 01

The role of funding in promoting Open Science practices

Training Course 5:
Empowering the Future of Research with Open Science

Module 13:
Investing in Open Science

LECTURE 01

Understanding Capacity Building in Open Science

Training Course 5:
Empowering the Future of Research with Open Science

Module 14:
Capacity Building and Training Programs in Open Science

LECTURE 02

Institutional Support for Capacity Building – Challenges and Best Practices

Training Course 5:
Empowering the Future of Research with Open Science

Module 14:
Capacity Building and Training Programs in Open Science

LECTURE 01

Introduction to AI

Training Course 5:
Empowering the Future of Research with Open Science

Module 15:
Open Science and Artificial Intelligence

LECTURE 02

AI and Open Science

Training Course 5:
Empowering the Future of Research with Open Science

Module 15:
Open Science and Artificial Intelligence

LECTURE 03

AI in evidence-informed decision making

Training Course 5:
Empowering the Future of Research with Open Science

Module 15:
Open Science and Artificial Intelligence

LECTURE 01

Introduction to Open Science Policies

Training Course 6:
Open science policies support open science practices

Module 16:
Open Science Policies

LECTURE 01

Open Science Policies support Open Science Practices: Stakeholders

Training Course 6:
Open science policies support open science practices

Module 17:
Open Science Policies support Open Science Practices

LECTURE 02

Open Science policies support Open Science Practices: Impact

Training Course 6:
Open science policies support open science practices

Module 17:
Open Science Policies support Open Science Practices

LECTURE 03

Challenges of Implementing and Barriers to adopting Open Science

Training Course 6:
Open science policies support open science practices

Module 17:
Open Science Policies support Open Science Practices

LECTURE 04

Cultural Changes required for Open Science Adoption

Training Course 6:
Open science policies support open science practices

Module 17:
Open Science Policies support Open Science Practices

LECTURE 05

Responsible Research Assessment Movement

Training Course 6:
Open science policies
support open science practices

Module 17:
Open Science Policies
support Open Science Practices

LECTURE 06

Open Science Infrastructures

Training Course 6:
Open science policies
support open science practices

Module 17:
Open Science Policies
support Open Science Practices

LECTURE 01

Open Science Workflows

Training Course 7:
Implementing Open Science Policies

Module 18:
Implementing Open Science Policies

LECTURE 01

Designing Open Science policies in practice

Training Course 7:
Implementing Open Science Policies

Module 19:
From developing to evaluating
Open Science policies

LECTURE 01

Adapt policies based on new evidence and changing circumstances

Training Course 7:
Implementing Open Science Policies

Module 20:
Open Science Policies Adaptation

ACTIVITY
Exploring the Impact of Open Science

Main Goal: Communicate the real–world benefits of Open Science.

Type: Reflection Exercise (Self–paced).

Short Description: Participants select and analyze examples from the course, then craft a narrative to convey their impact to a target audience.

ACTIVITY
Case Study on Ethical Dilemmas in Closed Science

Main Goal: Analyze ethical challenges in closed science.

Type: Case Study (Self–paced).

Short Description: Participants examine real–world cases where lack of transparency led to ethical concerns and discuss possible solutions.

ACTIVITY
I, AI - Ethical Debates and Policy Decisions for the EU In the light of the Development of Conscious AI

Main Goal: Debate policy solutions for emerging AI challenges.

Type: Scenario–Based Group Discussion (Live session).

Short Description: Participants engage in a futuristic scenario to assess the implications of conscious AI, discuss regulation, and propose strategies at the EU level.

ACTIVITY
Exploring the Role of Honest Brokers in Real-Life Decision Making

Main Goal: Examine the challenges faced by honest brokers in science–policy interactions.

Type: Case Study & Reflection Exercise (Self–paced).

Short Description: Participants study a real–world case on knowledge brokerage in environmental decision–making, reflect on key challenges, and reflect on how Open Science could improve the process.

ACTIVITY
Reflecting on Key Challenges of Honest Brokers

Main Goal: Explore the challenges faced by Honest Brokers in science–policy mediation and identify strategies to address them.

Type: Group Discussion & Reflection (Live session).

Short Description: Participants discuss in groups challenges like time constraints, consensus–building, and trust, then reflect on challenges and strategies.

ACTIVITY
Open Data Science Tutorial

Main Goal: Learn basic data analysis techniques to understand and predict outcomes in real–world scenarios.

Type: Hands–on Data Exploration (Live session).

Short Description: Participants work with a sample dataset to explore trends, find connections between data, and make predictions using simple statistical methods.

ACTIVITY

Organise a "Coffee with Open Science" Session

Main Goal: Develop skills in stakeholder identification and policy discussion facilitation in Open Science.

Type: Scenario Planning & Reflection (Live session).

Short Description: Participants organize a "Coffee with Open Science" session in groups, by selecting a relevant topic, identifying key stakeholders, and justifying their participation in policy discussions.

ACTIVITY

Guidelines for communication with policy makers

Main Goal: Practice crafting effective messages for policymakers.

Type: Scenario-Based Communication Exercise (Self-paced).

Short Description: Participants select a policymaking scenario, develop a key message for the target group, and apply communication strategies to engage policymakers effectively.

ACTIVITY

Focus on... Verbal communication of uncertainty in practice

Main Goal: Develop skills to communicate research uncertainty effectively to different audiences.

Type: Roleplay Exercise & Reflection (Self-paced, Live).

Short Description: Participants take on different stakeholder roles to practice verbal communication strategies for conveying research uncertainty.

ACTIVITY

Advocating for Open Science

Main Goal: Strengthen advocacy and communication skills by crafting arguments to promote Open Science to funders.

Type: Collaborative Role Play & Reflection (Self-paced, Live).

Short Description: Participants learn to identify funder priorities and craft compelling arguments for Open Science, with a live role-play session where groups pitch to different types of funders.

ACTIVITY

Sharing Best Practices and Challenges in Open Science Capacity Building

Main Goal: Reflect on Open Science capacity-building initiatives and identifying transferable strategies and challenges.

Type: Reflection Exercise on personal experiences (Self-paced).

Short Description: Participants will share examples of Open Science capacity-building initiatives from their own contexts, analyze outcomes, and identify strategies for improvement and scaling up initiatives.

ACTIVITY

Analysing an Open Science Policy

Main Goal: Develop the ability to critically analyse Open Science policies, and assess their strengths and weaknesses.

Type: Reflective Analysis (Self-paced).

Short Description: Participants select and analyse an Open Science policy, comparing it against a reference document on key Open Science elements.

ACTIVITY

Case studies of Open Science policy development and implementation

Main Goal: Analyze real-world Open Science policy case studies to identify stakeholders, key topics, and implementation challenges.

Type: Reflective Analysis & Collaborative Discussion (Self-paced, Live).

Short Description: Participants select and reflect on a case study of Open Science policy, then engage in group discussions to analyze stakeholders, topics, and implementation challenges.

ACTIVITY

Barriers to Open Research

Main Goal: Identify and propose solutions to barriers hindering Open Science practices.

Type: Reflection & Collaborative Discussion (Self-paced, Live).

Short Description: Participants explore barriers to Open Science in areas like competitive advantage, publication, and data reuse, proposing solutions.

ACTIVITY

Designing an Open Science Workflow

Main Goal: Design Open Science workflows to explore the integration of Open Science practices in varying research scenarios.

Type: Reflection & Design Exercise (Self-paced).

Short Description: Participants design three research workflows (ideal, difficult, and easy) incorporating Open Science practices across seven research steps, followed by a reflection on their choices and implementation feasibility.

ACTIVITY

Evaluating Key Performance Indicators (KPIs) in Open Science

Main Goal: Critically evaluate Key Performance Indicators (KPIs) to understand their practical relevance and impact in Open Science.

Type: Reflection (Self-paced).

Short Description: Participants review examples of KPIs in Open Science, reflect on the most significant and feasible ones, and discuss how to measure their effectiveness in real-world contexts.