



Requirements for Open Science (OS) Formal and Informal Curriculum

1.0 Introduction

- **1.1 Purpose and Objectives**

- State the main goal of this document: to define the requirements for developing a comprehensive formal and informal curriculum for Open Science, as part of the OPEN-ASIA project (T4.4).

- **1.2 Project Background**

- Briefly describe the "OPEN-ASIA: Boosting engagement of HEIs in Open Science in India and Malaysia" project, co-funded by the Erasmus+ Programme, and how this curriculum fits into its goals.

- **1.3 Scope**

- Define the boundaries of the curriculum (e.g., what topics are included and excluded).

- **1.4 Definition of Key Terms**

- **OS:** Open Science.
- **Formal Curriculum:** Structured learning (e.g., accredited courses) integrated into university programmes with predefined learning outcomes and assessments.
- **Informal Curriculum:** Flexible learning outside of the traditional structure, such as through workshops, projects, and self-study, also known as non-formal programmes.

2.0 Target Audience Analysis

- **2.1 Primary Learners**

- Describe the primary group of learners (e.g., undergraduate students, postgraduate students, researchers, specific faculty).

- **2.2 Secondary Learners**

- Identify any other potential groups who might benefit (e.g., industry professionals, librarians, administrative staff).

- **2.3 Prerequisite Knowledge**



- List any required skills or knowledge learners should have before starting the curriculum.

3.0 Formal Curriculum Requirements

- **3.1 Overall Learning Outcomes**

- List the key knowledge, skills, and competencies learners should possess upon completion (e.g., understanding of FAIR principles, ability to create a data management plan).

- **3.2 Core Thematic Modules**

- Outline the main subjects or modules to be taught.
- *Example:*
 - **Module 1:** Principles and Overview of Open Science
 - **Module 2:** Open Access Publishing and Repositories
 - **Module 3:** FAIR Data and Research Data Management
 - **Module 4:** Citizen Science and Public Engagement

- **3.3 Pedagogical Approach**

- Specify the recommended teaching methods (e.g., lectures, lab sessions, case studies, project-based learning, blended learning).

- **3.4 Assessment and Evaluation**

- Define how learners will be assessed (e.g., examinations, coursework, final projects, presentations, peer review exercises).

- **3.5 Required Resources**

- List necessary materials:
 - **Course Materials:** Readings, exercises, video lectures, and other digital resources.
 - **Platforms:** A designated Learning Management System (LMS), such as the example provided by ISSBS: elearningproject.eu.
 - **Tools:** Specific software or lab equipment.

4.0 Informal Curriculum Requirements

- **4.1 Objectives of Informal Learning**

- Explain how informal activities will complement formal learning (e.g., fostering practical skills, networking, real-world exposure).



- **4.2 Proposed Informal Learning Activities**

- **4.2.1 Capacity Building Workshops (CBWs):** Structured workshops (like CBW1, CBW2, CBW3) to build specific skills.
- **4.2.2 Guest Lecture Series:** Identify potential speaker profiles (e.g., industry experts, leading academics in Open Science).
- **4.2.3 Internships & Placements:** Outline requirements and potential partners.
- **4.2.4 Hackathons or Competitions:** Describe potential themes related to Open Science challenges.
- **4.2.5 Online Resources:** Curate a list of recommended MOOCs, tutorials, and forums.

5.0 Integration and Accreditation

- **5.1 Bridging Activities**

- Describe how to connect formal lessons with informal experiences.

- **5.2 Learner Pathway**

- Provide a sample timeline showing how a learner might navigate both curriculums.

- **5.3 Course Accreditation**

- Detail the plan for discussing accreditation with each partner university's senate.
- Outline the process for ensuring compliance with university and national regulations.
- Plan for the formal integration of courses into existing programmes.

6.0 Implementation Plan

- **6.1 Roles and Responsibilities**

- **P8-EPDRI:** Detail specific responsibilities in content creation, piloting, and reporting.
- **ISSBS:** Acknowledge their role in proposing instructions, creating a sample course, providing templates, and compiling evaluation/final reports.
- **Expert Teams:** Note the assembly of expert teams for pilot implementation.

- **6.2 Timeline & Milestones**

- **Phase 1: Content Identification (Feb 2024 - Dec 2024)**



- Conduct surveys, desk research, and review best practices.
- Gather input from Capacity Building Workshops (CBW1 & CBW2).
- Discuss content and delivery during Study Visit & CBW3 in Slovenia.
- **Phase 2: Course Development (Jan 2025 - May 2025)**
 - Develop roadmap for pilot implementation.
 - Create course materials (readings, exercises, videos).
- **Phase 3: Accreditation & Reporting (June 2025 - Aug 2025)**
 - Secure course accreditation from partner senates.
 - Partners prepare institutional reports on T4.4 activities.
 - **Deliverable: Final Comprehensive Report (D4.2) due by 30 Nov 2025.**
- **Phase 4: Piloting and Feedback (Sept 2025 - Apr 2026)**
 - Partners submit pilot implementation plans.
 - Pilot the courses with students and staff.
 - Collect structured feedback.
- **Phase 5: Evaluation and Improvement (Sept 2025 - Apr 2026)**
 - Compile evaluation reports from pilot phase.
 - Refine course content based on feedback for official implementation.
- **6.3 Quality Assurance**
 - Outline the iterative process of piloting, feedback collection, evaluation, and course refinement to ensure high quality and relevance.

7.0 Appendices (Optional)

- **7.1 Detailed Module Descriptions**
- **7.2 Sample Lesson Plan**
- **7.3 List of Potential Industry Partners**
- **7.4 Link to Exemplary OS Course (ISSBS)**