UNIVERSITATEA DIN BUCUREȘTI
VIRTUTE ET SAPIENTIA
INTERDISCIPLINARY SCHOOL OF DOCTORAL STUDIES
FACULTATEA DE STUDII INTERDISCIPLINARE
UNIVERSITATEA DIN BUCUREȘTI

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# DISCIPLINE SHEET
## Academic year 2025-2026

### 1. About the program

| | |
|---|---|
| 1.1 Higher education institution | University of Bucharest |
| 1.2 Faculty | Faculty of Interdisciplinary Studies |
| 1.3 Department | Interdisciplinary School of Doctoral Studies – ISDS-UB |
| 1.4 Field of study | - |
| 1.5 Study cycle | Doctorate |
| 1.6 Study program / Qualification | |

### 2. About the discipline

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2.1 Name of the discipline | | | | **Open Science and the New Research & Innovation Ecosystem** | | | |
| 2.2 Holder of the course | | | | **CS 2 Mariana Chioncel** | | | |
| 2.3 Holder of the seminar | | | | - | | | |
| 2.4 Study year | I | 2.5 Semester | II | 2.6 Evaluation type | V | 2.7 Discipline regime | Transversal |

### 3. Total estimated time

| | | | | | |
|---|---|---|---|---|---|
| 3.1 Number of weekly hours | - | 3.2 out of which course: | - | 3.3 seminar/laboratory | - |
| 3.4 Total hours in the curriculum | 24 | 3.5 out of which course: | 24 | 3.6 seminar/laboratory | - |
| **Distribution of time:** | | | | | **hours** |
| Study according to the textbook, course material, bibliography and notes | | | | | 40 |
| Additional documentation in the library, on specialized electronic platforms and in the field | | | | | 30 |
| Preparation of seminars/laboratory, assignments, papers, portfolios and essays | | | | | 40 |
| Tutoring | | | | | 4 |
| Examinations | | | | | 12 |
| Others…… | | | | | - |

| | |
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| 3.7. Total hours of individual study | 126 |
| 3.8. Total hours per semester | 150 |
| 3.9. Number of credits | **6** |

### 4. Preconditions (where applicable)

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| 4.1 curriculum | The course content is designed as a stand-alone module and does not require prior completion of specific courses. |
| 4.2 skills | Participants are expected to have basic familiarity with academic research practices and general digital literacy. An interest in research policy, evaluation frameworks is recommended. |

### 5. Conditions (where applicable)

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| 5.1 course delivery | Room with multimedia equipment (video projector, smart board). For online delivery, access to a stable internet connection and Zoom application is required. |

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| 5.2 conducting the seminar/laboratory | - |

## 6. Learning outcomes

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| **Knowledge** | **LO1**. Demonstrate familiarity with research methodology in the research field and related areas and specific methods in the main research field<br><br>**LO2.** Demonstrate understanding of the principles and strategies of effective scientific communication, including the ability to tailor messages to diverse audiences and platforms. They will be familiar with the conventions of academic writing, publishing processes, and the use of various communication tools in disseminating research findings.<br><br>**LO3.** Demonstrate understanding the principles of academic integrity, including honesty, transparency, and proper attribution of sources. They will be familiar with institutional policies and international standards regarding ethical conduct in research and scholarship |
| **Skills** | **LO1.** Demonstrate the ability to complete the independent research process within given time frames:<br><br>a) Review and place the research issue (question/problem/performance practice) in relation to the existing literature;<br><br>b) Select appropriate research methodology and methods from the wide variety of approaches<br><br>c) Identify, locate, and collect sufficient body of evidence/data<br><br>d) Analyze and interpret findings/evidence<br><br>e) Draw appropriate conclusions; write about research in the field using clear and effective written expression of evidence-based analytical reasoning and successfully defend the research in front of a panel of experts.<br><br>**LO2.**<br><br>**(a)** Demonstrate the capacity in various contexts to present and discuss research findings with the scientific community using clear and effective oral expression of evidence-based, analytical reasoning as well as to adapt the discussion depending on varied audience.<br><br>**(b)** Be able to clearly articulate complex ideas and research results both orally and in writing, create well-structured scientific documents, and present their work at conferences or in public forums. Demonstrate proficiency in using digital media and visual representations to enhance the impact of their communication<br><br>**LO3.**<br><br>**(a)** Demonstrate independence in routine work including autonomous learning, reading widely, creative thinking, critical thinking, effective time management, collegiality, initiative, responsibility, problem-solving etc.<br><br>**(b)** Demonstrate the capacity to identify and avoid plagiarism, fabrication, and other forms of academic misconduct. Graduates will apply proper citation practices, manage data responsibly, and uphold the integrity of the research process in all their academic work. |

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| **Responsibility and autonomy** | **LO1.**<br>**(a)** Reflect on and evaluate the research process constantly and revise as needed.<br>**(b)** Demonstrate ability to learn, adapt and work in varied intredisciplinary and multi-national environments so as to analyse findings and perspectives found in other disciplines that contribute to greater understanding in their field.<br>**LO2.**<br>**(a)** Identify independently seek opportunities to communicate their research, adapt their communication style to different contexts, and continuously improve their skills based on feedback.<br>**(b)** Demonstrate the capacity to contribute to the development of society and support learning of others through research and teaching.<br>**(c)** Demonstrate initiative in fostering dialogue within interdisciplinary teams and the public, acting as ambassadors for science in society.<br>**LO3.**<br>**(a)** Demonstrate intellectual independence and academic integrity and the ability to make assessments of research ethics.<br>**(b)** Demonstrate accountability for their own work and contribute to a culture of integrity within their academic and professional communities. They will actively promote ethical behavior and address breaches of academic integrity when encountered.<br>**(c)** Demonstrate independence in maintaining high ethical standards, even in challenging situations. They will be proactive in seeking guidance when ethical dilemmas arise and continuously reflect on their practices to ensure alignment with the values of academic integrity.<br>**(d)** Demonstrate ability to assess the possibilities and limitations of research, its role in society, and the responsibility of the individual for how it is used. |

## 7. Contents

| 8.1 Course | Methods | Observations |
|---|---|---|
| 1. **Why Open Science? Shifting the Research Paradigm.** The evolution of the research model: from *publish* to *share* to *collaborate*. The reproducibility crisis and scientific credibility. Open Science in relation to traditional research models. Implications for research and career evaluation. | Lecture, explanation, conversation | 4 hours |
| 2. **Research & Innovation Policies at European and International Level** The European Research Area (ERA). CoARA and the reform of research assessment. Open Science requirements in Horizon Europe. Strategic perspectives for FP10. UNESCO Recommendation on Open Science. | Lecture, explanation, conversation | 4 hours |
| 3. **Research Funding Landscape: Europe and Romania** Structure of Horizon Europe programmes. | Lecture, explanation, conversation | |

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| Emerging orientations under FP10. Romania's National RDI Plan (PNCDI IV). Individual grants vs collaborative consortia. Strategies for successful applications.<br><br>**Research Evaluation and Indicators**<br><br>Limits of the Journal Impact Factor. Narrative CV formats. Responsible metrics and contribution-based evaluation. From quantity of publications to quality and societal contribution. | | 4 hours |
| **4. Open Access Models and Publishing Strategies**<br><br>Gold, Green, and Diamond Open Access. Rights retention and Open Access plans. Preprints and open peer review. Identifying and avoiding predatory journals.<br><br>**Research Data Management and DMP**<br><br>What is a Data Management Plan (DMP)? Structure and practical examples. Obligations under Horizon Europe and PNCDI. Sensitive data management and GDPR considerations. | Lecture, explanation, conversation | 4 hours |
| **5. Research Integrity and Ethics**<br><br>Plagiarism and data manipulation. Publication bias. Open peer review practices. Scientific responsibility and societal accountability.<br><br>**Impact-Oriented Research and Science Communication**<br><br>Citizen science and societal engagement. Policy briefs and evidence-informed policymaking. Science communication and science diplomacy. Workshop: drafting a policy brief. Identifying and avoiding predatory journals. | Lecture, explanation, conversation | 4 hours |
| **6. Research Security and Responsible Openness**<br><br>Balancing openness with security in contemporary research systems. The concept of "as open as possible, as closed as necessary." Dual-use research, sensitive technologies, and emerging risks (AI, biotech, critical infrastructures). Export control regulations, foreign interference, and institutional compliance frameworks. Data protection, intellectual property, and risk assessment in international collaborations. Integrating research security considerations into Open Science practices | Lecture, explanation, conversation | 4 hours |

**References:**


- Lecture notes provided by the instructor
- M Chioncel – Analysis of the factors that obstruct the diffusion of the innovation. https://www.research.gov.ro/wp-content/uploads/2025/07/analysis-of-the-factors-that-obstruct-the-diffusion-of-innovatio.pdf
- Nauwelaers C, Holm-Nielsen, L, Camarero, M, Chioncel, M (2023) **Implementation Plans for Recommendations from PSF Country Review of the Romanian Research and Innovation System** https://op.europa.eu/en/publication-detail/-/publication/b04c695d-1562-11ee-806b-01aa75ed71a1/language-en
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- Brainard, J. (2019). *Rogue journals get blacklisted*. **Science**.
- CARTEA ALBA A TRANZITIEI CATRE STIINTA DESCHISĂ (White Paper on the Transition to Open Science 2023-2030), https://www.open-science.ro/resurse/cartea-alba-a-tranzitiei-catre-stiinta-deschisa-2023-2030
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- Grudniewicz, A., Moher, D., Cobey, K. D., et al. (2019). *Predatory journals: No definition, no defence*. **Nature, 576**, 210–212.
- Hicks, D., Wouters, P., Waltman, L., de Rijcke, S., & Rafols, I. (2015). *Bibliometrics: The Leiden Manifesto for research metrics*. **Nature, 520**, 429–431. https://doi.org/10.1038/520429a
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Various online resources (examples):
https://www.open-science.ro/#more
https://european-research-area.ec.europa.eu

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## 8. Correlating the content of the discipline with the expectations of representatives of the epistemic community, professional associations and representative employers in the field related to the program

**Course: Open Science and the New Research & Innovation Ecosystem**

The course provides a structured overview of current transformations in research and innovation from both conceptual and institutional perspectives. It addresses evolving approaches to access to research outputs, data governance, European policy frameworks – including CoARA – and principles of responsible research assessment. The course also examines how these developments are integrated into funding programmes and institutional policies, highlighting their impact on skills, career development, and governance in research and innovation systems.

The course *Open Science and the New Research & Innovation Ecosystem* is aligned with the evolving expectations of the academic and research community, European policy frameworks, professional associations, and public and private research-performing organizations. Current developments in the European Research Area, Horizon Europe, and initiatives such as CoARA emphasize responsible research assessment, transparency, research integrity, data stewardship, and societal impact—competencies that are increasingly required in research careers and funding applications.

Employers in universities, research institutes, funding agencies, and innovation-driven organizations expect graduates to demonstrate not only disciplinary expertise, but also the ability to manage research data, comply with open access and ethical standards, engage in interdisciplinary collaboration, and understand evaluation and funding mechanisms. The course addresses these expectations by integrating policy literacy, practical knowledge of funding structures, responsible metrics, and impact-oriented research practices.

By combining conceptual understanding with applied components (e.g., research evaluation frameworks, data management planning, policy brief drafting), the discipline supports the development of transferable skills relevant for academic careers, research management, science policy, and knowledge-intensive sectors, ensuring coherence between training outcomes and the needs of the contemporary research and innovation ecosystem.

## 9. Assessment

| Type of activity | Assessment criteria | Evaluation methods | Weight in the final grade |
|---|---|---|---|
| Course | • Ability to synthesize complex policy and technological developments<br>• Critical engagement with contemporary research governance debates<br>• Capacity to connect theory with practical implementation<br>• Clarity, coherence, and professional academic communication<br>• Conceptual clarity and coherence<br>• Integration of policy and governance frameworks<br>• Analytical depth and critical perspective<br>• Practical relevance and feasibility of recommendations<br>• Quality of oral presentation and argumentation | **Thematic Presentation (Individual or Small Group)**<br><br>Students prepare a structured presentation (15–20 minutes, followed by discussion) on a focused topic situated at the intersection of Open Science, emerging technologies, research governance, research security and research evaluation reform.<br><br>**Format:** Individual or small group (max. 2–3 students)<br>**Duration:** 15–20 minutes presentation + 10 minutes discussion<br>**Submission:** Slides + short written brief (2–3 pages) | 100% |

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| Minimum performance standard | Assessment is finalized with the qualification **"pass"** or **"fail."**<br>The minimum performance standard is obtaining the "pass" qualification under conditions of academic integrity**.** |

Fill in date:
01.02.2026

Holder of the course,

CS 2, PhD Mariana Chioncel

Director ISDS-UB,
Conf. Dr. Habil. Mihaela MATACHE