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EUROPEAN UNIVERSITY FOR CUSTOMISED EDUCATION

STUDY GUIDE

WHAT IS SCIENCE?

Organised by

University of Cantabria (UC)

1. IDENTIFYING DATA.	
· Course Name.	What is science?
· Coordinating University.	Univeristy of Cantabria (UC)
· Partner Universities Involved.	-
· Course Field(s).	Extra.
· Related Study Programme.	Transversal Doctoral Programme.
· ISCED Code.	0111 – Education Science
· SDG.	SDG 4. Quality Education. SDG 9. Industry, Innovation and Infrastructure.
· Study Level.	B, M, D.
· EUNICE Key Competencies	Problem solving: Red - partially Teamworking: NOT AT ALL Communication: NOT AT ALL Self-management: Orange- moderately Cognitive flexibility: Green - strongly Digital competence: Green - strongly Technical competence: Red - partially Global intercultural competence: Green - strongly

· Number of ECTS credits allocated.	2 ECTS.
· Mode of Delivery.	Online self-study + Online live.
· Language of Instruction.	English.
· Course Dates.	09.02.2026 – 27.03.2026. (9th of February – 27th of March). - 09.02.2026 – 22.02.2026 - Module 1. Logical positivism: the philosophy of Rudolf Carnap. - 25.02.2026 – 08.03.2026 - Module 2. Karl Popper: the rise and fall of falsificationism. - 10.03.2026 – 29.03.2026 - Module 3. Thomas Kuhn: paradigms, revolutions and... a shiff of relativism?

· Precise Schedule of the Lectures.	Synchronous lessons the following days: - 19.02.2026 - Module 1. Logical positivism: the philosophy of Rudolf Carnap - 16:00-18:30 (CET). - 05.03.2026 - Module 2. Karl Popper: the rise and fall of falsificationism - 16:00-18:30 (CET). - 26.03.2026 - Module 3. Thomas Kuhn: paradigms, revolutions and... a shiff of relativism? - 16:00-18:30 (CET).
· Key Words.	Science, Philosophy, Carnap, Popper, Kuhn.
· Catchy Phrase.	Dare to discover what science is.

· Prerequisites and co-requisites.	- EUNICE Student. - English Level: B2. - Basic Science Education. - Intellectual curiosity.
· Number of EUNICE students that can attend the Course.	24.
· Course inscription procedure(s).	Standard EUNICE process.

2. CONTACT DETAILS.	
· Department.	Department of Earth and Materials Science and Engineering.
· Name of Lecturer.	Diego Ferreño.
· E-mail.	diego.ferreno@unican.es
· Other Lecturers.	-

3. COURSE CONTENT.

Philosophy of Science.
The course covers the main contributions of three of the most relevant philosophers of science of all time: Rudolf Carnap, Karl Popper and Thomas Kuhn. The conception that each of these authors makes of the scientific phenomenon serves as an excuse to review the main scientific theories, which will be presented in their historical context.

4. LEARNING OUTCOMES.

General concepts of Philosophy of Science.
After completing the course, students will have understood the successes and limitations of the different interpretations that have been offered about the scientific phenomenon. It will become

apparent that science is a complex, dynamic process that springs from the imagination of scientists and that, at least to date, has not been satisfactorily codified in a set of simple rules.

5. OBJECTIVES.

- Improvement of critical thinking.
- Ability to appreciate the advantaged of the data-driven methodology.

6. COURSE ORGANISATION.

UNITS

1.	Logical Positivism: the philosophy of Rudolf Carnap.
2.	Karl Popper: the rise and fall of falsificationism.
3.	Thomas Kuhn: paradigms, revolutions and … a whiff of relativism?

LEARNING RESOURCES AND TOOLS.

Virtual course, material provided by the professor.

PLANNED LEARNING ACTIVITIES AND TEACHING METHODS.

In view of the current circumstances, lessons will be given by the professor and, after each one, there will be a join session for questions and debate.

7. ASSESSMENT METHODS, CRITERIA AND PERIOD.

Multichoice tests, group presentation of a topic proposed by the professor.

OBSERVATIONS.

8. BIBLIOGRAPHY AND TEACHING MATERIALS.

Specific lectures provided by the professor.
General literature:

• Chalmers, Alan. What Is This Thing Called Science? Third Edition (1999). 288 pages. Open University Press; ISBN-10: 0335201091, ISBN-13: 978-0335201099.
• Godfrey-Smith, Peter. Theory and Reality: An Introduction to the Philosophy of Science (2003). 272 pages. University of Chicago Press. ISBN-10: 0226300633, ISBN-13: 978-0226300634.
• Newton-Smith, William H. The Rationality of Science (1981). 308 pages. ISBN-10: 0415058775, ISBN-13: 978-0415058773.

• Sokal, Alan. Fashionable Nonsense: Postmodern Intellectuals' Abuse of Science (1999). 300 pages. St Martin's Press. ISBN-10: 0312204078, ISBN-13: 978-0312204075.