

STUDY GUIDE

WHAT IS SCIENCE?

Organised by

**UNIVERSITY OF CANTABRIA
(UC)**



1. IDENTIFYING DATA.

· Course Name.	What is science?
· Coordinating University.	University of Cantabria (UC).
· Partner University Involved.	-
· Course Field(s).	Extra.
· Related Study Program.	Transversal Doctoral Programme.
· Course Code.	EScDOc26
· ISCED Code.	226, 441
· SDG.	4, 9
· Study Level.	Master, PhD.

· Number of ECTS credits allocated.	2
· Mode of Delivery.	Online.
· Language of Instruction.	English.
· Delivery Period.	Second Semester.
· Course Dates.	14.02.2022 – 31.3.2022
· Precise Schedule of the Lectures.	Synchronous sessions at 16:00 – 18:30 CET on: 17.02, 03.03, 24.03.2022 21,5 hours – 3 weeks
· Key Words.	Science, Philosophy, Carnap, Popper, Kuhn.
· Catchy Phrase.	Dare to discover what science is.
· Link to Course Guide.	Page 23, 27 and 37 in this link .

· Prerequisites and co-requisites.	<ul style="list-style-type: none"> · EUNICE Student. · English Level: B2. · Basic Science Education. · Intellectual curiosity.
· Number of EUNICE students that can attend the Course.	24
· Course inscription procedure(s).	<ul style="list-style-type: none"> · UC students: via UC Virtual Campus. · Students from other EUNICE universities: Contact your International Relations Office (IRO).
· Applications Deadline.	31 st January 2022, Monday.



2. CONTACT DETAILS.

· Department.	Department of Earth and Materials Science and Engineering.
· Name of Lecturer.	Diego Ferreño.
· E-mail.	diego.ferreno@unican.es
· Office.	Office 0002, ground floor, School of Civil Engineering.
· 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.

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| 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 AND CRITERIA.

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

OBSERVATIONS.

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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.

