

Teaching guide

IDENTIFICATION DETAILS

Degree:	Biomedicine		
Scope	Biology and Genetics		
Faculty/School:	Experimental Sciences		
Course:	HISTORY AND PHILOSOPHY OF SCIENCE		
Type:	Basic Training	ECTS credits:	6
Year:	1	Code:	2137
Teaching period:	First-second semester		
Subject:	Anthropology		
Module:	Social Aspects of Biomedicine		
Teaching type:	Classroom-based		
Language:	Spanish		
Total number of student study hours:	150		

SUBJECT DESCRIPTION

The subject of History and Philosophy of Science is responsible for teaching students about scientific revolutions and advances throughout history, their philosophical analysis and the understanding of new trends in scientific thinking, enabling such students to critically observe the development of Science and its influence on the mentality and worldview in force in each era, and, more specifically, today.

GOAL

The subject History and Philosophy of Science aims to bring the student closer, from a historical perspective, to the scientific fact, its characterization and its meaning.

To do so, the course will reflect on the emergence and development of science, as it is currently understood, based on three blocks. The first one will introduce, in an introductory way, what we mean by university, what is its mission, what we understand by history, what its functions are, and what we mean by science. The second block will approach the historical evolution of scientific fact by analyzing, mainly, two major revolutions, the one developed between the end of the Middle Ages and the time of Newton and the one developed from the end of the 19th century to the last decades of the 20th century. Based on this analysis, the third block will seek to reflect on Science, the explanation of its development, its objectivity, its sociological implications and its relationship with philosophy and religion.

PRIOR KNOWLEDGE

Those of the Degree.

COURSE SYLLABUS

1ST BLOCK. INTRODUCTION

1. University, History, Science

2ND BLOCK. HISTORY OF SCIENCE

2. Science and Knowledge: Ancient and Medieval Tradition

3. The scientific revolution of early modernity

a. Rebirths and Humanism. The meaning of geographical expansion

b. From Copernicus to Galileo

c. Newton's revolution

4. From bourgeois society to the institutionalization of the investigative fact

5. The second scientific revolution. The Twentieth Century: A New Physics; The Stellar Universe; From Biology to New Humanisms

3RD BLOCK. THE NATURE OF SCIENCE

6. Philosophy of Science.

7. Science as a sociological fact.

8. Science, Philosophy and Religion.

EDUCATION ACTIVITIES

MASTER LESSON: The master lesson is an indispensable element in an institution, the University, which since its inception has been based on the hierarchy of knowledge. An indispensable element whose success - it is essential

to keep in mind - depends on the teacher's solid preparation. The example of the teacher who gives our university its name, Francisco de Vitoria, imposes on us the obligation to flee from any type of improvisation as well as from the temptation to repeat indefinitely the lessons disconnected from the audience that listens to them and from the developments that our own research and study impose. At the same time, the success of this indispensable tool also depends on the prior preparation of the student, who cannot arrive at the classroom ignoring the contents to be covered in the lesson. To avoid this, you should follow the instructions provided in the classroom and in the virtual classroom, read the texts recommended to you and be aware that some lessons and others are not independent. Finally, the master lesson requires a determined attitude of the teacher and the student, attentive, receptive and willing to dialogue

AUTONOMOUS WORK. The University is a training center for mature people, who must be aware that the results obtained are based, before anything else, on personal effort: on the solitude of studying, on the solitude of reading, on the solitude of meditation and, all of this, requires time. Even so, the fact that the student must take the initiative does not imply giving up the help of the other: the teacher, the classmates, the tutors, the mentors.

Being clear that if there is no such autonomous work, the student will never be able to detect their needs and, therefore, will not be able to take advantage of the support provided by others. Based on these two pillars, we will carry out essays, classroom presentations, readings and other evaluation tests.

DISTRIBUTION OF WORK TIME

TEACHER-LED TRAINING ACTIVITIES	INDIVIDUAL WORK
60 Horas	90 Horas

LEARNING RESULTS

Detect the link between the current world and historical events and recognize the need to locate the historical framework of any event in order to understand it.

Know and understand the various historical events that have led to the development of Science over the centuries and the different currents of thought that, in turn, they have generated.

SPECIFIC LEARNING RESULTS

Understand the current sociopolitical changes and their origin.

To know and understand the chronological evolution and the main revolutions and historical changes.

Develop a critical and constructive attitude based on past events.

Develop university capacity for oral and written expression.

LEARNING APPRAISAL SYSTEM

Class attendance is strictly mandatory, although, in and of itself, it does not merit any qualification. Only those students who, for justified reasons, have express permission from the career management and those who, based on university regulations, are exempt from attending class. For example, students who do not enroll for the first time in the subject.

ORDINARY CALL

The TASKS proposed in the virtual classroom and the ACTIVITIES carried out in the classroom (both oral and written; individual and in groups; previously notified or unexpected) will represent 30% of the final grade. It should be noted that the average will only be taken after passing the final exam.

EXAM. The exam will represent 70% of the final grade. It should be noted:

it is mandatory to obtain a minimum score of 5 to pass the exam and to measure with the other evaluable elements; otherwise the subject will be suspended.

no student will be allowed to enter to take the exam once it has started.

the exam must respond in its content to what was proposed by the teacher and, in its form, must be intelligible; considering any exam that does not adapt to the syntactic, semantic and orthographic rules of the Spanish language unintelligible.

Final observation: regardless of whether students take the exam or not, if they have completed or delivered evaluable activities throughout the course, their score can never be 'Not submitted'.

STUDENTS WHO ARE EXEMPT FROM ATTENDING CLASS should take into account the following: It is your responsibility to prepare the study material, for which the teacher will provide, through the virtual classroom and this same teaching guide, the relevant bibliography and, where appropriate, some topics in notes. Your final grade will be obtained by considering an exam (the same one taken by students who take the subject without a waiver), which will represent 70% of the grade and a work, which will be proposed in the virtual classroom, which will represent the remaining 30% of the subject.

EXTRAORDINARY CALL

A compulsory work will be proposed with the following characteristics: the topic will be raised in the virtual classroom on the same date the work will represent 30% of the final grade (this average will only be achieved after passing the exam, extraordinary call) it will not be qualified if submitted out of date the work will be individual plagiarism will entail 0 qualification points, regardless of the subsequent sanctions that the student may deserve, the work must respond in its content to what was proposed by the teacher and, in its form, must be intelligible; considering unintelligible any work that does not conform to the syntactic, semantic and orthographic rules of the Spanish language.

The exam will represent 70% of the final grade, it will be mandatory to pass it to take into account the other elements of the evaluation, no student will be allowed to take the exam once the exam has started. The exam must respond in its content to what was proposed by the teacher and, in its form, must be intelligible; considering any exam that does not adapt to the syntactic, semantic and orthographic rules of the Spanish language unintelligible.

Plagiarism, as well as the use of illegitimate means in evaluation tests, will be sanctioned in accordance with those established in the Evaluation Regulations and the University's Coexistence Regulations.

ETHICAL AND RESPONSIBLE USE OF ARTIFICIAL INTELLIGENCE

1.- The use of any Artificial Intelligence (AI) system or service shall be determined by the lecturer, and may only be used in the manner and under the conditions indicated by them. In all cases, its use must comply with the following principles:

a) The use of AI systems or services must be accompanied by critical reflection on the part of the student regarding

their impact and/or limitations in the development of the assigned task or project.

b) The selection of AI systems or services must be justified, explaining their advantages over other tools or methods of obtaining information. The chosen model and the version of AI used must be described in as much detail as possible.

c) The student must appropriately cite the use of AI systems or services, specifying the parts of the work where they were used and describing the creative process followed. The use of citation formats and usage examples may be consulted on the Library website(https://www.ufv.es/gestion-de-la-informacion_biblioteca/).

d) The results obtained through AI systems or services must always be verified. As the author, the student is responsible for their work and for the legitimacy of the sources used.

2.- In all cases, the use of AI systems or services must always respect the principles of responsible and ethical use upheld by the university, as outlined in the [Guide for the Responsible Use of Artificial Intelligence in Studies at UFV](#). Additionally, the lecturer may request other types of individual commitments from the student when deemed necessary.

3.- Without prejudice to the above, in cases of doubt regarding the ethical and responsible use of any AI system or service, the lecturer may require an oral presentation of any assignment or partial submission. This oral evaluation shall take precedence over any other form of assessment outlined in the Teaching Guide. In this oral defense, the student must demonstrate knowledge of the subject, justify their decisions, and explain the development of their work.

BIBLIOGRAPHY AND OTHER RESOURCES

Basic

Bernal, John D. Social History of Science Barcelona Peninsula, 1967 and 1972

Chalmers, Alan F. What is that thing called science? 21st century, Madrid, 2003

Crombte, A.C. History of Science: From Saint Augustine to Galileo. 1/ V-XIII Centuries and 2/ XIII-XVII Centuries Alliance, Madrid, 1974

(Crombte, A.C. History of Science: From Saint Augustine to Galileo. 1/ V-XIII Centuries and 2/ XIII-XVII Centuries Alliance, Madrid, 1974 , ||Dampier, William Cecil History of Science and Its Relations with Philosophy and Religion Tecnos, Madrid, 1992)

Sánchez Ron, José Manuel The Power of Science. Social, Political and Economic History of Science (19th and 20th Centuries) Barcelona, Review, 2022

Additional

Crick, Francis What a crazy purpose. A personal vision of scientific discovery Tusquets, Barcelona, 1989
(Crick, Francis What a crazy purpose. A personal vision of scientific discovery Tusquets, Barcelona, 1989 ,
||Darwin, Charles The Letters of the Beagle Mexico, FCE, 2014)

POSKETT, James Horizontes. A Global History of Science Barcelona, Review, 2022

Sánchez Ron, José Manuel The Power of Science. Social, Political and Economic History of Science (19th — 21st Centuries) Barcelona, Crítica, 2022

(Sánchez Ron, José Manuel The Power of Science. Social, Political and Economic History of Science (19th — 21st Centuries) Barcelona, Crítica, 2022 , ||Suppe, Frederick The Structure of Scientific Theories Editora Nacional, Madrid, 1979)