AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Major Problems in History of Science								
Course Code	FLSF631		Couse Level		Third Cycle (Doctorate Degree)				
ECTS Credit	5	Workload	131 *(Hours)*	Theory	3	Practice	0	Laboratory	0
Objectives of the Course	The aim of this course is to discuss and assess the properties of theories which are characterized as scientific; the problems of scientific activity, the historical value of scientific theories; and the historical processes of conceptions of science as well as scientific activity from the viewpoints of different doctrines in the philosophy of science.								
Course Content	The historical development of natural science; the conceptions of nature and science; the epistemology of scientific cognition; epistemological problems concerning theoretical and empirical knowledge; the methodological problems of scientific inquiry. The subject-matters of this course are the following issues: i. The conceptions of nature in Ancient Greeks; ii. Aristotelian physics and his theory of science; iii. Medieval conceptions of nature and science; iv. The rise of modern science (Galileo, Kepler, Descartes, Newton) and the critique of Aristotelian conceptions of nature and science; v. The conception of scientific knowledge in Hume, Kant and in the 19th century philosophers; vi. The rise of philosophy of science in the 20th century and the Logical Positivists; vii. Karl Popper and his falsificationism, the demarcation between science and pseudo-science; viii. structuralism and historicism in the philosophy of science; ix. Paul K. Feyerabend and his anarchist philosophy of science; x. Imre Lakatos and his methodology of scientific research programs.								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Discussion, Case Study, Individual Study								
Name of Lecturer(s)									

Assessment Methods and Criteria		
Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	60

Recommended or Required Reading	
1	Koyré, A. (2000). Bilim Tarihi Yazıları. (Çev. Kurtuluş Dinçer). Tübitak Yayınları
2	Lakatos, I. (2013). Bilimsel Araştırma Programlarının Metodolojisi. (Çev. Duygu Uygun). Alfa Yayınları.
3	Rovelli, C. (2020). Miletli Anaksimandros ya da Bilimsel Düşüncenin Doğuşu. (Çev. Atakan Altınörs). Bilge Kültür Sanat.
4	Kuhn, T.S. (2007). Kopernik Devrimi. (Çev. H. Turan – D. Bayrak). İmge Kitabevi Yayınları.
5	Grant, E. (1986). Ortaçağlarda Fizik Bilimleri. (Çev. Aykut Göker). Verso Yayınları.

Week	Weekly Detailed Course Contents	
1	Theoretical	Introduction: What is the history of science?
2	Theoretical	The rising of natural sciences in ancient times.
3	Theoretical	Anaximander of Miletus and his scientific revolution.
4	Theoretical	Aristotelian physics and astrnomy
5	Theoretical	Ptolemy’s Astronom
6	Theoretical	Medieval conceptions of science and nature.
7	Theoretical	Contributions to astronomy in the Middle Ages.
8	Theoretical	Medieval physics and its theory of impetus
9	Theoretical	Copernican revolution in astronomy
10	Theoretical	A comparison between Ptolemaic system and Copernican system
11	Theoretical	Galileo’s mathematical and mechanical conception of nature
12	Theoretical	A New astronomy and Kepler laws.
13	Theoretical	The fundamental principles of Newtonian physics
14	Theoretical	A comparison between Aristotelian physics and Newtonian physics
15	Theoretical	The scientific revolution in 20th century: Einstein’s theory of gravity.

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	15	0	3	45
Reading	15	0	4	60
Midterm Examination	1	10	3	13
Final Examination	1	10	3	13
			Total Workload (Hours)	131
			[Total Workload (Hours) / 25*] = **ECTS**	5
**25 hour workload is accepted as 1 ECTS*				

Learning Outcomes	
1	Analyzing outlines of history of science
2	Describing the nature of ancient scientific thought
3	Comprehending medieval conceptions of science and nature
4	Discussing the conditions which determine the emergence of modern science
5	Learning scientific thinking and approaching current problems with scientific thinking

Programme Outcomes *(Philosophy Doctorate)*	
1	By deepening the rooted vision that has been built on the masters proficiency, to be able to create an origin philosophical solution to a specific problem.
2	Being able to systemize, analyze and critically evaluate philosophical knowledge, being able to conduct an independent philosophical research and gaining expertise in the field
3	To be able to comprehend the source and position of a specific philosophical issue in the history of philosophy and being able to realize its contemporary social value
4	To be able to access and understand the recent work of contemporary thinkers and being capable of genuine interpretation
5	To be able to contribute to the wellbeing of society by pursuing an academic education at advanced level

Contribution of Learning Outcomes to Programme Outcomes *1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High*

	L1	L2	L3	L4	L5
P1	2	1	2	1	
P2	2	2	1	2	1
P3	2	1	2	5	1
P4				2	
P5				1	