COURSE OUTLINE

(1) GENERAL

SCHOOL	SCHOOL OF SCIENCES		
ACADEMIC UNIT	DEPARTMENT OF MATHEMATICS		
LEVEL OF STUDIES	UNDERGRADUATE PROGRAM		
COURSE CODE	**311-3180**	**SEMESTER**	**G**
COURSE TITLE	PHILOSOPHY OF SCIENCE		
INSTRUCTOR			

INDEPENDENT TEACHING ACTIVITIES	**WEEKLY TEACHING HOURS**	**CREDITS**
	4	6

COURSE TYPE	Special background
PREREQUISITE COURSES:	NONE
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	GREEK
IS THE COURSE OFFERED TO ERASMUS STUDENTS	YES
COURSE WEBSITE (URL)	https://www.math.aegean.gr/index.php/en/education/undergraduate-programs

(2) LEARNING OUTCOMES

Learning outcomes
Mastery of bibliographic resources and core issues in the philosophy of science (e.g., Positivism, Falsificationism, Historicism, French Epistemological School). Critical evaluation of arguments for/against philosophical positions. Production of academic writing on these topics. Formulation of a holistic perspective on science and its challenges.
General Competences
Working independently. Team working. Working in an interdisciplinary environment.

(3) SYLLABUS

16th–17th Century Scientific Revolution: Contributions of Galileo, Descartes, and Newton. Shift from mechanistic frameworks to Newtonian unified field theory. Kantian Copernican Revolution. Paradigms & Paradigm Shifts (Thomas Kuhn). Falsificationism (Karl Popper). Logical Positivism: Quine, Carnap, Wittgenstein. Epistemological Anarchism (Paul Feyerabend). French Epistemological School: Gaston Bachelard.	
TEACHING MATERIAL DISTRIBUTION	The teaching material of the course is uniformly distributed during the semester.

(4) TEACHING and LEARNING METHODS - EVALUATION

<table>
<tr><td>DELIVERY</td><td>Face-to-face lectures.</td></tr>
<tr><td>USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY</td><td>• Communication with students via e-mail.
• Uploading course material on moodle system.</td></tr>
<tr><td>TEACHING METHODS</td><td>
<table>
<tr><th>Activity</th><th>Semester workload</th></tr>
<tr><td>Lectures</td><td>52</td></tr>
<tr><td>Independent Study</td><td>98</td></tr>
<tr><td>Course total (25 per ECTS)</td><td>150</td></tr>
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<tr><td>COURSE COMMITMENTS</td><td>Attending course is not obligatory.</td></tr>
<tr><td>STUDENT PERFORMANCE EVALUATION</td><td>Student’s evaluation is done in Greek through a written examination. For students with disabilities, evaluation takes place via oral exams.</td></tr>
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(5) ATTACHED BIBLIOGRAPHY

1. A. E. Chalmers, What is this thing called Science? University of Queensland and Press St. Lucia. 1992.