COURSE OUTLINE

1. GENERAL

FACULTY	ENGINEERING TECHNOLOGY		
DEPARTMENT	ELECTRICAL ENGINEERING DEPARTMENT		
EDUCATION LEVEL	UNDERGRADUATE		
COURSE CODE	ZN13	**SEMESTER**	7TH
COURSE TITLE	PHILOSOPHY OF SCIENCES		

INDEPENDENT TEACHING ACTIVITIES *in the case of credits being awarded in distinct parts of the course eg. Lectures, Laboratory Exercises, etc. If credit units are awarded uniformly for the whole course, indicate the weekly hours of teaching and the total number of credits*	**WEEKLY COURSE HOURS**	**CREDITS**
Lectures and Practice Exercises	2	3
Laboratory	-	-
Add rows if needed. The teaching organization and the teaching methods used are described in detail at 4.		

COURSE TYPE *Background, General Knowledge, Scientific Area, Skills Development*	Scientific Area
PREREQUISITE COURSES:	
LANGUAGE OF COURSE AND EXAMINATIONS:	Greek - English
THE COURSE IS OFFERED TO ERASMUS STUDENTS	YES
COURSE WEBPAGE (URL)	

2. LEARNING RESULTS

Learning Results

The learning outcomes of the course describe the specific knowledge, skills and competences of an appropriate level that students will acquire after successfully completing the course.
Refer to Appendix A.

- *Description of the level of learning outcomes for each cycle of study according to the European Higher Education Area Qualifications Framework*
- *Descriptive Indicators of Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning*
- *and Annex B.*
- *Curriculum Vitae Summary Guide*

The course consists of two main parts and is an interdisciplinary approach to science in education. In the first part there is a historical retrospection of the sciences from antiquity to the present day, while the second part refers to the philosophy of science and approaches the problems referring to the nature and character of scientific concepts.

Upon successful completion of this course the student will be able to know:
• The history of the philosophy of science.
• The scientific solutions that have been proposed to solve the basic problems of the positive sciences
• The common methodological characteristics of sciences

General Abilities

Considering the general competencies that the graduate must have acquired (as listed in the Diploma Supplement and listed below), which one (s) is the course intended for?

- *Search, analyze and synthesize data and information, using the necessary technologies*

- *Adapt to new situations*
- *Decision making*
- *Autonomous work*
- *Teamwork*
- *Work in an international environment*
- *Working in an interdisciplinary environment*
- *Production of new research ideas*
- *Design and project management*
- *Respect for diversity and multiculturalism*
- *Respect for the natural environment*
- *Demonstration of social, professional and moral responsibility and sensitivity to gender issues*
- *Exercise of criticism and self-criticism*
- *Promote free, creative and inductive thinking*

- Search, analyze and synthesize data and information, using the necessary technologies
- Decision making
- Working in an interdisciplinary environment
- Autonomous Work
- Production of new Research Ideas
- Promote free, creative and inductive thinking

3. COURSE CONTENT

History of science

- The age of brass
- Science in ancient Greece
- The Arabic Science and Science in Europe in the Middle Ages
- Scientific Revolution and Modern Science

Philosophy of Science

- Relationship between philosophy and science
- The rational movement (Bacon, Hume, Cartesius)
- Induction and science
- Critical Rationalism
- The theory of falseness
- Scientific Methodology per Newton
- Macrocosm - Microcosm
- Micro-evolution and macro-evolution: from nature to man
- Quantum Physics and Philosophy. The Copenhagen School

4. TEACHING AND LEARNING METHODS - EVALUATION

DELIVERY METHOD *Face to face, distance learning etc.*	Class room ,
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES *Use of ICT in Teaching, in Laboratory Education, in Communication with Students*	Presentation of the Theory with the help of slides, Course website with supporting and auxiliary material, Creation of an asynchronous platform.

TEACHING ORGANIZATION

Teaching methods described in detail:

Lectures, Seminars, Laboratory Exercise, Field Exercise, Study & Analysis of Bibliography, Tutorial, Practice (Placement), Clinical Exercise, Artistic Lab, Interactive Teaching, Educational Visits, Project Work, etc. .;

The student's study hours for each learning activity and the hours of non-guided study are indicated so that the total workload at the semester corresponds to the ECTS

Activity	***Semester workload***
Lectures	60
Laboratory Exercise	-
Written paper	
Independent Study	30
Course Total (30 hours of workload per unit of credit)	***90***

STUDENT EVALUATION	THEORY
Description of the evaluation process *Assessment Language, Assessment Methods, Formulation or Conclusion, Multiple Choice Test, Short Response Questions, Test Questions, Problem Solving, Written Paper, Reporting, Oral Examination, Public Presentation, Laboratory Work, Clinical Patient Examination, Artistic Interpretation, Other* *Evaluation criteria are identified and examined to check if they are accessible to students.*	Written work (50%), final exam (50%) that includes theoretical questions, judgement and problem solving questions from different modules of the course.

5. RECOMMENDED BIBLIOGRAPHY

- Suggested bibliography:
- Related scientific journals:

History of Sciences and Philosophy of Science, Interdisciplinary Approach of Science in Education. Socrates Toubektsis, Photomethexis Publications

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