COURSE OUTLINE

(1) GENERAL

SCHOOL	School of Sciences		
ACADEMIC UNIT	Department of Physics		
LEVEL OF STUDIES	School of Sciences		
COURSE CODE	**M321**	**SEMESTER**	**1**
COURSE TITLE	Didactics of Physics II		

INDEPENDENT TEACHING ACTIVITIES *if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits*	**WEEKLY TEACHING HOURS**	**CREDITS**
	3	5
Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).		

COURSE TYPE *general background, special background, specialised general knowledge, skills development*	General background
PREREQUISITE COURSES:	
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek
IS THE COURSE OFFERED TO ERASMUS STUDENTS	Yes
COURSE WEBSITE (URL)	

(2) LEARNING OUTCOMES

Learning outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.

Consult Appendix A

- *Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area*
- *Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B*
- *Guidelines for writing Learning Outcomes*

At the end of the course the students are expected:

1. To have gained basic knowledge on the strategy of teaching in the field of classical physics at the secondary school level education, taking into consideration the factors that influence the educational procedures.
2. To have gained knowledge on didactic methods used for teaching the field of classical physics oriented in active learning environments.
3. To be able to plan, construct and implement integrated proposals of teaching thematic sections in the field of classical physics at the secondary school level education, including relevant experimental procedures, as well as problem solving strategies.

General Competences

Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?

Search for, analysis and synthesis of data and information, with the use of the necessary technology	*Project planning and management*
Adapting to new situations	*Respect for difference and multiculturalism*
Decision-making	*Respect for the natural environment*
Working independently	*Showing social, professional and ethical responsibility and sensitivity to gender issues*
Team work	*Criticism and self-criticism*
Working in an international environment	*Production of free, creative and inductive thinking*
Working in an interdisciplinary environment	*……*

Production of new research ideas	*Others…* *…….*

Search, analyse and compile data and information, with the use of the necessary technology.
Working independently.
Team work.
Project planning and management.
Production of free, creative and inductive thinking.

(3) SYLLABUS

Physics teaching strategies. Factors that influence the educational procedures in physics teaching. Didactic methods used for teaching physics oriented in active learning environments. Planning, constructing and implementing integrated proposals of teaching thematic sections of physics.

(4) TEACHING and LEARNING METHODS - EVALUATION

DELIVERY *Face-to-face, Distance learning, etc.*	Face-to-face
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY *Use of ICT in teaching, laboratory education, communication with students*	Use of the internet www for the presentation of examples in the educational procedures, applications in the classroom and examples which include team work. The presentation is conducted by computer and projector. The Moodle asynchronous e-learning system is used for dissemination of notes, exercises and communication between the students and the instructor.
TEACHING METHODS *The manner and methods of teaching are described in detail.* *Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.* *The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS*	

Activity	***Semester workload***
Lectures	39
Study and analysis of bibliography	36
Project	25
Essay writing	25
Course total	**125**

STUDENT PERFORMANCE EVALUATION *Description of the evaluation procedure* *Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other* *Specifically-defined evaluation criteria are given, and if and where they are accessible to students.*	Written work and public presentation.

(5) ATTACHED BIBLIOGRAPHY

- Suggested bibliography:
- Related academic journals:

1. R. D. Knight, ‘Πέντε εύκολα μαθήματα: Στρατηγικές για την επιτυχή διδασκαλία της Φυσικής’ (μετάφραση Π. Γ. Τζαμαλής), Δίαυλος 2006.
2. A. B. Arons, ‘Οδηγός διδασκαλίας της Φυσικής’ (μετάφραση Α. Δ. Βαλαδάκης), Τροχαλία 1992.