

COURSE OUTLINE

(1) GENERAL

SCHOOL	SCHOOL OF EDUCATION		
ACADEMIC UNIT	DEPARTMENT OF PRIMARY EDUCATION		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE	DEE 603	SEMESTER	6 th
COURSE TITLE	Topics of atmospheric sciences and space in education		
INDEPENDENT TEACHING ACTIVITIES <i>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</i>	WEEKLY TEACHING HOURS	CREDITS	
Lectures	3	4	
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	Specific background - Specialization of general knowledge		
PREREQUISITE COURSES:	No		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	Yes		
COURSE WEBSITE (URL)	http://ecourse.uoi.gr/course/view.php?id=1578		

(2) LEARNING OUTCOMES

<p>Learning outcomes <i>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.</i></p> <p><i>Consult Appendix A</i></p> <ul style="list-style-type: none"> • <i>Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area</i> • <i>Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B</i> • <i>Guidelines for writing Learning Outcomes</i>
<p>The course provides students with knowledge for understanding meteorological parameters, atmospheric and astronomical phenomena. In particular, after the successful completion of the course the student will be able to:</p> <ol style="list-style-type: none"> 1. know the composition and structure of the atmosphere and to relate them with the rest data of the planet. 2. select the factors that determine the weather and climate. 3. interpret the important role of solar radiation in weather and climate. 4. distinguish and interpret the various meteorological phenomena . 5. interpret the state of the atmosphere taking into account the movements of the gas masses, their characteristics and their interactions with the earth surface. 6. interpret the greenhouse effect taking into account the radiation balance in the earth-atmosphere system. 7. interpret the weather reports taking into account basic elements of weather analysis and forecasting.

8. understand the structure of the solar system and focus on the characteristics of its planetary bodies.
9. correlate the characteristics of the Earth-Moon system and interpret the phenomena due to their relative positions.
10. discover the effect of space exploration in present and in future.

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

Adapting to new situations

Decision-making

Working independently

Team work

Working in an international environment

Working in an interdisciplinary environment

Production of new research ideas

Project planning and management

Respect for difference and multiculturalism

Respect for the natural environment

Showing social, professional and ethical responsibility and sensitivity to gender issues

Criticism and self-criticism

Production of free, creative and inductive thinking

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Others...

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- Search, analysis and synthesis of data and information, using the necessary technologies.
- Autonomous work.
- Teamwork.
- Promoting free, creative and inductive thinking.
- Respect for the natural environment.

(3) SYLLABUS

Topics:

- Composition and structure of the atmosphere.
- Solar radiation and the seasons.
- The Earth's climate zones and climate.
- Atmospheric parameters.
- Water in the atmosphere.
- Distribution and circulation of air.
- Weather Analysis and Forecast.
- The greenhouse effect.
- The solar system.
- Space.

(4) TEACHING and LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	Face-to-face teaching	
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i>	Digital technologies in the teaching practice and the learning process. Students are referred to meteorological map web sites and astronomical missions and observatories. Utilization of digital learning objects of the Hellenic repository "Photodentro" and international repositories.	
Thesis TEACHING METHODS <i>The manner and methods of teaching are described in detail. Lectures, seminars, laboratory practice,</i>	Activity	Semester workload
	Lectures	(3x13)=39
	Study and analysis of	38

<i>fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.</i> <i>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</i>	bibliography	
	Thesis writing	20
	Examination	3
	Course total	100
<p align="center">STUDENT PERFORMANCE EVALUATION</p> <p><i>Description of the evaluation procedure</i></p> <p><i>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</i></p> <p><i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i></p>	Formative and summative assessment with written assignments and oral presentations. Written final exam.	

(5) ATTACHED BIBLIOGRAPHY

A. Suggested bibliography (from system Endoxos):

- Aguado E., Burt J. (Επιστ. Επιμ: Αριστείδης Μπαρτζώκας), 2019. Ο Καιρός και το Κλίμα. Εισαγωγή στη Μετεωρολογία και Κλιματολογία, Εκδότης: ΜΑΡΙΑ ΠΑΡΙΚΟΥ & ΣΙΑ ΕΠΕ, ISBN: 978-960-508-297-0, Κωδικός Βιβλίου στον Εύδοξο: 86200731
- Κατσαφάδος Π., Μαυροματίδης Η., 2016. Εισαγωγή στην Φυσική της Ατμόσφαιρας και την κλιματική αλλαγή. Εκδότης: Ελληνικά Ακαδημαϊκά Ηλεκτρονικά Συγγράμματα και Βοηθήματα - Αποθετήριο "Κάλλιπος", ISBN: 978-960-603-053-6, Κωδικός Βιβλίου στον Εύδοξο: 320273, Διαθέσιμο στο: <http://hdl.handle.net/11419/3708>

B. Additional bibliography

- Δανέζης Μ., Θεοδοσίου Σ., 2012. Το σύμπαν που αγάπησα. Εκδόσεις ΔΙΑΥΛΟΣ Α.Ε., ISBN: 978-960-531-288-6, Κωδικός Βιβλίου στον Εύδοξο: 22684958
- Τσιγάνης, Κ., Βάρβογλης, Χ., 2015. Πλανητικά συστήματα. [ηλεκτρ. βιβλ.] Αθήνα: Σύνδεσμος Ελληνικών Ακαδημαϊκών Βιβλιοθηκών. Διαθέσιμο στο: <http://hdl.handle.net/11419/2593>
- Στάθης, Δ., 2015. Μαθήματα δασικής μετεωρολογίας και κλιματολογίας. [ηλεκτρ. βιβλ.] Αθήνα: Σύνδεσμος Ελληνικών Ακαδημαϊκών Βιβλιοθηκών. Διαθέσιμο στο: <http://hdl.handle.net/11419/4657>