

COURSE OUTLINE

(1) GENERAL

SCHOOL	UNIVERSITY OF THESSALY		
ACADEMIC UNIT	DEPARTMENT OF CIVIL ENGINEERING		
LEVEL OF STUDIES	UNDERGRADUATE (LEVEL 7)		
COURSE CODE	ΣΥ1110	SEMESTER	8th
COURSE TITLE	Airport System Planning and Operation		
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
		4	5
<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, specialized general knowledge, skills development</i>	Specialized general knowledge		
PREREQUISITE COURSES:	-		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	GREEK		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	YES		
COURSE WEBSITE (URL)	https://eclass.uth.gr/courses/CIV_U_330/		

(2) LEARNING OUTCOMES

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> <i>Consult Appendix A</i> • <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>
Upon successful completion of the course, students will be able to: • Understand airport systems. • Analyze fundamental concepts and characteristics of air transport systems. • Comprehend key aspects of airport design (ground and airside infrastructure, terminal layout, runway and taxiway design, etc.). • Apply methodologies used in the design, operation, and management of airports. • Implement relevant regulations and standards in airport planning and operations. • Design various airport subsystems (runways, taxiways, terminals, parking areas, etc.).

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?

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

- Search for, analyze, and synthesize data and information using appropriate technology
- Adapt to new situations
- Decision-making
- Independent work
- Demonstrate social and professional responsibility
- Critical thinking and self-assessment
- Promote free, creative, and inductive thinking
- Respect for diversity and multiculturalism
- Ability to generate and manage new ideas in collaboration with peers and academic staff

(3) SYLLABUS

1. Introduction to Airport Design and Operation
2. Air Transport Market, Legislation, and Regulations
3. Forecasting Air Transport Demand
4. Aircraft Systems and Operations
5. Airport Site Selection and Planning
6. Runway, Taxiway, and Apron Design
7. Terminal and Airport Facilities
8. Air Traffic Management and Control
9. Airport Ground Access and Connectivity
10. Environmental Impacts of Airports
11. Airport Costs, Economics, and Administration
12. Field Visit to an Airport
13. Presentation of Student Projects

(4) TEACHING and LEARNING METHODS - EVALUATION

DELIVERY	Face-to-face	
<i>Face-to-face, Distance learning, etc.</i>		
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY	• Use of e-class platform for lecture notes, assignments, and announcements • Video presentations and case studies • Office hours for student consultations	
TEACHING METHODS	Activity	Semester workload
<i>The manner and methods of teaching are described in detail.</i> <i>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.</i>	Lectures	35 hours
	Exercises	17 hours
	Educational visit	4 hours
	Assignments	35 hours
	Independent Study	34 hours
	Course total	125 hours
<i>The student's study hours for each learning activity are given as well as the hours of non- directed study</i>		

according to the principles of the ECTS		
STUDENT PERFORMANCE EVALUATION <i>Description of the evaluation procedure</i> <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> <i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i>	• Individual Assignment (40%): 2,000-word essay on a topic related to air transport. • Final Exam (60%): Covers both theoretical knowledge and practical problem-solving.	

(5) ATTACHED BIBLIOGRAPHY

Primary Textbooks:

- Profyllidis, V. (2010). *Air Transport and Airports*. Athens: Papasotiriou.
- De Neufville, R., Odoni, A. (2013). *Airport Systems: Planning, Design and Management*. McGraw-Hill.

Additional References:

- International Civil Aviation Organization (2016). *Annex 14: Aerodrome Design and Operations*.
- FAA (2012). *Airport Design Guidelines*.
- Hirst, M. (2008). *The Air Transport System*. Woodhead Publishing.

Relevant Journals:

- *Journal of Air Transport Management*
- *Transportation Research Part A, B, C, D, E*
- *Transport Policy*
- *Transportation Research Procedia*