

1.1.1 Environmental Impact Assessment Studies for Transport

GENERAL

SCHOOL	Engineering		
ACADEMIC UNIT	CIVIL ENGINEERING		
LEVEL OF STUDIES	Undergraduate		
COURSE CODE	ΣΥΦ015	SEMESTER	8th
COURSE TITLE	Environmental Impact Assessment Studies for Transport		
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, specialised general knowledge, skills development</i>	Specialization Course		
PREREQUISITE COURSES:			
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	No		
COURSE WEBSITE (URL)			

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>Upon completing the course students should be able to</p> <ul style="list-style-type: none"> • Recognize the institutional framework for the protection of the environment in Greece and the stages of environmental impact assessment studies execution of transport infrastructure systems, • Recognise the basic units of road construction environmental impacts, • Address issues in road traffic noise and vibrations, air pollution, aesthetic pollution, anti-pollution measures and environmental monitoring programs. 								
<p>General Competences <i>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></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"><i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i></td> <td style="width: 50%; border: none;"><i>Project planning and management</i></td> </tr> <tr> <td style="border: none;"><i>Adapting to new situations</i></td> <td style="border: none;"><i>Respect for difference and multiculturalism</i></td> </tr> <tr> <td style="border: none;"><i>Decision-making</i></td> <td style="border: none;"><i>Respect for the natural environment</i></td> </tr> <tr> <td style="border: none;"><i>Working independently</i></td> <td style="border: none;"><i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i></td> </tr> </table>	<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>
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<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>Working in an international environment</i> <i>Working in an interdisciplinary environment</i> <i>Production of new research ideas</i>	<i>Criticism and self-criticism</i> <i>Production of free, creative and inductive thinking</i> <i>.....</i> <i>Others...</i> <i>.....</i>
<p>The course contributes to the following skills:</p> <ul style="list-style-type: none"> _ Search for, analysis and synthesis of data and information, with the use of the necessary technology _ Adapting to new situations _ Decision-making _ Project planning and management _ Respect for the natural environment. 	

SYLLABUS

<ul style="list-style-type: none"> • Institutional framework for the protection of the environment in Greece • Execution stages for environmental impact assessment studies for road transportation projects • • Basic evaluation sections for environmental assessment and impacts for road transportation projects • Land uses, natural and human ecosystems • Road traffic noise and vibrations • Measurement and evaluation of continuous noise level from road operation • Methods of road traffic noise prediction and evaluation (construction – operation phases) • Anti-noise barriers • Air pollution, air pollutants from road traffic • Emission, pollution concentration, pollution dispersion and parameters • Road traffic noise and air pollution monitoring systems • Metrological equipment for acoustic measurements.
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TEACHING and LEARNING METHODS - EVALUATION

<p style="text-align: center;">DELIVERY</p> <p style="text-align: center;"><i>Face-to-face, Distance learning, etc.</i></p>	Face to face.	
<p style="text-align: center;">USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY</p> <p style="text-align: center;"><i>Use of ICT in teaching, laboratory education, communication with students</i></p>	Powerpoint presentations, e-learning platform for educational material	
<p style="text-align: center;">TEACHING METHODS</p> <p><i>The manner and methods of teaching are described in detail.</i></p> <p><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></p> <p><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></p>	Activity	Semester workload
	Lectures	52
	Individual study	78
	Course total (26 hours workload per ECTS credit)	130
<p style="text-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</i></p>	<p>Final written exam (100%) which includes:</p> <ul style="list-style-type: none"> - Open ended questions - Problem solving questions (exercises) <p>OR</p> <p>Final written exam (70%) + Optional individual assignment (30%).</p>	

<i>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>	The evaluation criteria are presented in the 1st lecture of the semester to all students. Furthermore, each student can see his graded exam/ written assignment paper and talk on the analysis of his written performance with the professor.
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ATTACHED BIBLIOGRAPHY

Vogiatzis, K. (2014). Environmental Policy and Implementation Framework. Simmetria Editions, ISBN 978-960-266-390-5 [in Greek].

Tzika-Chatzopoulou, A., Chaikali, S., Vogiatzis, K. (2010). Protection of the Greek Acoustic Landscape. Papatiriu Editions, ISBN: 978-960-7182-56-2 [in Greek].