

1.1.1 Sustainable Urban Mobility

GENERAL

SCHOOL	Engineering		
ACADEMIC UNIT	CIVIL ENGINEERING		
LEVEL OF STUDIES	Undergraduate		
COURSE CODE	ΣΥΓ011	SEMESTER	7th
COURSE TITLE	Sustainable Urban Mobility		
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</p> <p><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>Consult Appendix A</p> <ul style="list-style-type: none"> • 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 								
<p>Upon completing the course students should be able to identify gaps in conventional approaches to transport for the achievement of sustainable urban mobility,</p> <ul style="list-style-type: none"> • Implement alternative approaches to the design of urban transport, • Design infrastructure for non-motorized vehicles, • Identify key factors that influence transport choices and transport behavior, • Familiarize with current transport technologies, • Define basic principles for drafting a Sustainable Urban Mobility Plan 								
<p>General Competences</p> <p><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> <tr> <td>Search for, analysis and synthesis of data and information, with the use of the necessary technology</td> <td>Project planning and management</td> </tr> <tr> <td>Adapting to new situations</td> <td>Respect for difference and multiculturalism</td> </tr> <tr> <td>Decision-making</td> <td>Respect for the natural environment</td> </tr> <tr> <td>Working independently</td> <td>Showing social, professional and ethical responsibility and sensitivity to gender issues</td> </tr> </table>	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
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							

<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

<p>European transport policy for urban mobility</p> <ul style="list-style-type: none"> • Urban mobility and analysis of commuters' travel behavior • Sustainable development and sustainable urban mobility • Sustainable transport modes (walking, cycling) and their infrastructure • Methodologies of road safety audit and mobility of pedestrians and cyclists in the urban environment • Shared transport, micromobility • Autonomous and electric vehicles • Intelligent Transport Systems and sustainable urban mobility • Energy, environment and economy of transport • Safety, accessibility and social issues of transports • Sustainable Urban Mobility Plans.

TEACHING and LEARNING METHODS - EVALUATION

<p style="text-align: center;">DELIVERY</p> <p><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><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>The evaluation criteria are presented in the 1st lecture of the semester to all students. Furthermore, each student can</p>	

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.

see his graded exam/ written assignment paper and talk on the analysis of his written performance with the professor.

ATTACHED BIBLIOGRAPHY

- [in Greek] Βλαστός, Θ., Μπακογιάννης, Ε. (2019). Προς μια Ελλάδα με λιγότερα αυτοκίνητα. ΕΚΔΟΣΕΙΣ ΓΡΗΓΟΡΗ ΟΕ, ISBN: 978-960-612-248-4.
- [in Greek] Γαβανάς, Ν., Παπαϊωάννου, Π., Πιτσιάβα-Λατινοπούλου, Μ., Πολίτης, Ι. (2016). Αστικά δίκτυα μεταφορών και διαχείριση κινητικότητας. Ελληνικά Ακαδημαϊκά Ηλεκτρονικά Συγγράμματα και Βοηθήματα - Αποθετήριο "Κάλλιπος", ISBN: 978-960-603-155-7.
- [in Greek] Τσέτσης, Σ. (2013). Πράσινες μετακινήσεις στις Πόλεις. Α. ΠΑΠΑΣΩΤΗΡΙΟΥ ΣΙΑ Ι.Κ.Ε., ISBN: 978-960-491-077-9.
- [in Greek] Φραντζεσκάκης, Ι.Μ., Πιτσιάβα-Λατινοπούλου, Μ.Χ., Τσαμπούλας, Δ.Α. (2002). Διαχείριση Κυκλοφορίας. Α. ΠΑΠΑΣΩΤΗΡΙΟΥ ΣΙΑ Ι.Κ.Ε., ISBN: 978-960-7510-50-1.
- [in Greek] Γαλάνης, Α. (2011). Συμβολή στη διαμόρφωση μεθοδολογίας ελέγχου και αξιολόγησης της οδικής ασφάλειας και κινητικότητας πεζών στο αστικό περιβάλλον. Διδακτορική Διατριβή, Πανεπιστήμιο Θεσσαλίας, Τμήμα Πολιτικών Μηχανικών.
- [in Greek] Μηλάκης, Δ. (2006). Χρήσεις γης και μεταφορές. Διερεύνηση της επίδρασης των πολεοδομικών χαρακτηριστικών μακρο- και μικρο- κλίμακας στις επιλογές μετακίνησης. Διδακτορική Διατριβή, Εθνικό Μετσόβιο Πολυτεχνείο, Σχολή Αγρονόμων και Τοπογράφων Μηχανικών.
- Attard, M., Shiftan, Y. (Ed.) (2015). Sustainable Urban Transport (Transport and Sustainability, Vol. 7), Emerald, HEAL-Link Emerald ebook series (BME), ISBN: 978-1-78441- 615-7.
- Gudmundsson, H., Hall, R.P., Marsden, G., Zietsman, J. (2016). Sustainable Transportation, Indicators, Frameworks, and Performance Management (Springer Texts in Business and Economics). Springer Berlin Heidelberg, HEAL-Link Springer ebooks, ISBN: 978-3-662-46924- 8.
- National Association of City Transportation Officials (2014). Urban Bikeway Design Guide. Island Press/Center for Resource Economics, HEAL-Link Springer ebooks, ISBN: 978-1-61091- 582-3.