

## 1.1.1 Road Operation and Traffic Management

### GENERAL

<b>SCHOOL</b>	Engineering		
<b>ACADEMIC UNIT</b>	CIVIL ENGINEERING		
<b>LEVEL OF STUDIES</b>	Undergraduate		
<b>COURSE CODE</b>	ΣΥΓ013	<b>SEMESTER</b>	8th
<b>COURSE TITLE</b>	Road Operation and Traffic Management		
<b>INDEPENDENT TEACHING ACTIVITIES</b> <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>	<b>WEEKLY TEACHING HOURS</b>	<b>CREDITS</b>	
	4	5	
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
<b>COURSE TYPE</b> <i>general background, special background, specialised general knowledge, skills development</i>	Specialization Course		
<b>PREREQUISITE COURSES:</b>			
<b>LANGUAGE OF INSTRUCTION and EXAMINATIONS:</b>	Greek		
<b>IS THE COURSE OFFERED TO ERASMUS STUDENTS</b>	No		
<b>COURSE WEBSITE (URL)</b>			

### LEARNING OUTCOMES

<p><b>Learning outcomes</b> <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"> <li>• <i>Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area</i></li> <li>• <i>Descriptors for Levels 6, 7 &amp; 8 of the European Qualifications Framework for Lifelong Learning and Appendix B</i></li> <li>• <i>Guidelines for writing Learning Outcomes</i></li> </ul>
<p>Upon completing the course students should be able to define concepts in road operation and traffic management,</p> <ul style="list-style-type: none"> <li>• Traffic operations and road maintenance,</li> <li>• Intelligent Transport Systems,</li> <li>• Traffic Management Centers.</li> <li>• To analyze, schedule and deal with issues concerning traffic congestion, incidents, special events, demand, and parking.</li> <li>• To recognize the procedures of inspection and maintenance of the road network with technical and economic data.</li> </ul>
<p><b>General Competences</b> <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> <p><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>Respect for difference and multiculturalism</i></p>

<i>Adapting to new situations</i> <i>Decision-making</i> <i>Working independently</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>Respect for the natural environment</i> <i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i> <i>Criticism and self-criticism</i> <i>Production of free, creative and inductive thinking</i> ..... <i>Others...</i> .....
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The course contributes to the following skills:

- \_ Search, analysis and synthesis of data and information, with the use of the necessary technology
- \_ Adapting to new conditions
- \_ Decision-making
- \_ Project planning and management
- \_ Respect for the natural environment.

**SYLLABUS**

- Road operations and traffic management
- Traffic operations and road maintenance
  - Institutional framework in Greece
  - Intelligent Transport Systems
  - Traffic Management Centers
  - Congestion management
  - Incident management
  - Special events management
  - Demand management
  - Parking management
  - Inspections and maintenance, procedures, types, indexes, intervention planning
  - Economic methods of road and traffic management.

**TEACHING and LEARNING METHODS - EVALUATION**

<b>DELIVERY</b> <i>Face-to-face, Distance learning, etc.</i>	Face to face.	
<b>USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY</b> <i>Use of ICT in teaching, laboratory education, communication with students</i>	Lectures Presentation using laptop and video projector or remotely, e-lecture if required. Learning process support through the electronic e-learning platform. Distance meetings between for collaboration beyond class (via a digital platform, e.g. ZOOM, Skype). Posting announcements on the Department's website and on the online page of the course within the electronic e-learning platform. Teacher and student communication via email.	
<b>TEACHING METHODS</b> <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>  <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>	<b>Activity</b>	<b>Semester workload</b>
	Lectures	52
	Individual study	78
	Course total (26 hours workload per ECTS credit)	<b>130</b>

<p><b>STUDENT PERFORMANCE EVALUATION</b></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>	<p>Final written exam (100%) which includes:</p> <ul style="list-style-type: none"> <li>- Open ended questions</li> <li>- Problem solving questions (exercises)</li> </ul> <p>OR</p> <p>Final written exam (70%) + Optional individual assignment (30%).</p> <p>The evaluation criteria are communicated to the students in the first lecture of the course. Also, each student is given the opportunity to check their graded sheet and have their performance analyzed.</p>
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## ATTACHED BIBLIOGRAPHY

- Mouratidis, A.K. (2008). Road Construction, Road Projects Management. University Studio Press, ISBN: 978-960-12-1759-8 [In Greek].
- Franzeskakis, I.M., Golias, I.K., Pichiava-Latinopoulou, M.H. (2009). Traffic Engineering. Ed.PAPASOTIRIOU co, ISBN: 978-960-7182-42-5 [In Greek].
- Franzeskakis, I.M., Pitsiava-Latinopoulou, M.H., Tsamboulas, D.A. (2002). Traffic Management. Ed. PAPASOTIRIOU co, ISBN: 978-960-7510-50-1 [In Greek].
- Roess, R.P., Prassas, E.S. (2014). The Highway Capacity Manual: A Conceptual and Research History. HEAL-Link Springer ebooks, ISBN: 978-3-319-05786-6.