

a) General			
<i>School</i>	ENGINEERING		
<i>Academic unit</i>	MECHANICAL ENGINEERING		
<i>Level of studies</i>	Undergraduate		
<i>Course code</i>	MM209Y03	<i>Semester</i>	9
<i>Course title</i>	Ground vehicles		
<i>Independent teaching activities</i>		<i>Weekly teaching hours</i>	<i>ECTS</i>
Lectures		4	7.0
Laboratory exercises		1	
<i>Course type</i>	Knowledge deepening/consolidation		
<i>Course category</i>	Compulsory for Direction 2		
<i>Prerequisite courses</i>	-		
<i>Language of instruction and examinations</i>	Greek		
<i>Is the course offered to Erasmus students</i>	No		
<i>Course website (url)</i>	https://eclass.uniwa.gr/courses/MECH141/		
b) Learning outcomes and general competences			
b1. Learning outcomes			
Upon completion of the course, students will be able to:			
<ul style="list-style-type: none"> - Recognizes the main systems of vehicles. - Understands the design for each vehicle use orientation. - Analyzes the dynamic behavior of vehicles. - Calculates basic parameters. - Designs vehicles. - Improves driving behavior. - Study the vehicles durability 			
b2. General competences			
<ul style="list-style-type: none"> - Search, Analysis and Synthesis of data and information with the use of new technologies - Decision Making - Production of new research ideas 			
c) Syllabus			
Main vehicle systems, suspension systems, steering systems, vehicle safety, dynamic vehicle behavior, engines, trucks, special purpose vehicles, electric vehicles, autonomous vehicles, performance vehicles.			
d) Teaching and learning methods - Evaluation			
Delivery	Face-to-face		
Use of information and communications technology	<ul style="list-style-type: none"> - Commercial/free/open source software - Multimedia applications - MS Teams/Moodle/eclass - Open courses 		
Teaching methods	<i>Activity</i>	<i>Semester workload</i>	
	Lectures	39	
	Tutorials	13	
	Laboratory exercises	13	

	Computational exercises	26
	Individual work	65
	Course total	156
Student performance evaluation	Written examination, group assignments, oral examinations for laboratory exercises	
e) Suggested bibliography		
<ol style="list-style-type: none"> 1. Jazar, N. R. (2019). <i>Vehicle Dynamics</i>. Αθήνα: Εκδόσεις Φούντας. 2. Wong, J. Y. (2001). <i>Theory of Ground Vehicles</i>. Singapore: John Wiley & Sons. 3. Balkwill, J. (2018). <i>Performance Vehicle Dynamics</i>. Cambridge: Butterworth-Heinmann. 4. Gillespie, T.D., (1992). <i>Fundamentals of Vehicle Dynamics</i>. USA: Society of Automotive Engineers. 5. Demic, M., Σπέντζας, Κ.Ν. (2004). <i>Θεωρία κινήσεως τροχοφόρων οχημάτων</i>. Αθήνα: Κ.Ν. Σπέντζας. 		