

## COURSE DESCRIPTION

<b>Course Title</b>	<b>TRANSPORT ECONOMICS AND INTERMODAL SYSTEMS</b>				
<b>Course Code</b>	ATTE301				
<b>Course Type</b>	Elective				
<b>Level</b>	BSc				
<b>Year / Semester</b>	3 / Fall or Spring				
<b>Teacher's Name</b>	Emmanouil Nikolaidis, PhD				
<b>ECTS</b>	6 ECTS	Lectures / week	3	Laboratories/week	
<b>Course Purpose:</b>	The course aims to provide students with the basics on Transport Economics, the global Transport systems, the external economies in road and urban transport systems, as well as the CBA as a method to evaluate and assess transportation systems, taking under consideration the private / public cost and benefit.				
<b>Learning Outcomes</b>	<p>By the end of the course, the students should be able to:</p> <ul style="list-style-type: none"> <li>• Understanding the transportation systems and networks, the economic and spatial structure of transport systems, the transportation modes and the transport terminals.</li> <li>• Analyzing the international and regional transportation as well as the urban transportation systems.</li> <li>• Evaluating the environmental issues and the impact of transportation in the environment is also part of the learning outcomes.</li> <li>• Analysing the basics for the transport planning and policy, as well as the recent developments and challenges in the sector.</li> </ul>				
<b>Prerequisites</b>	NONE		<b>Corequisites</b>	NONE	

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<b>Course Content:</b>	<b>Indicative Course Content:</b>  <b>Historical Evolution of Transportation – Transportation Geography</b> A historical perspective on the evolution of transport systems underlines the impacts of technological innovations and how transportation improvements were interdependent with economic, social, and spatial changes.  <b>Transportation Systems and Networks</b> The transformation of the transportation systems at all scales, the role of information technologies, the digitalization of mobility, and how it leads to a higher level of integration between modes as well as the automation of transportation operations. The fourth industrial revolution, and how it impacts mobility and global value chains.  <b>Economic and spatial structure of Transport systems</b> The development of transportation networks, both in capacity and spatial extent. The importance of specific dimensions, such as nodes, locations, networks, and interactions.  <b>Transportation modes</b> Transportation modes and the three broad categories based on the medium they exploit: land, water, and air. Requirements and features of each mode and how it adapts to serve the specific demands of freight and passenger traffic.  <b>Transport Terminals – The function terminals – Freight - Location</b> The spatial and functional characteristics of transport terminals. Economic functions and clusters of specialized activities.  <b>International and Regional Transportation-</b> Globalization, trade, and freight distribution are interrelated and concern a mobility scale that spans regions, nations, and often continents. The transnational mobility and the geopolitical considerations, such as who controls trade routes and what forms of competition and cooperation have emerged with expanded trade relations.  <b>Transportation – Globalization and International trade</b> International trade as an exchange of goods or services across national jurisdictions. Inbound trade defined as imports, and outbound trade defined as exports. International trade and the regulatory oversight and taxation of the involved nations.  <b>Urban Transportation – Urban Spatial structure</b> Transportation in urban areas, the modes involved, the multitude of origins and destinations, and the amount and variety of traffic. Focus
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	<p>on passengers as cities were viewed as locations of utmost human interactions with intricate traffic patterns linked to commuting, commercial transactions, and leisure/cultural activities.</p> <p><b>Transport and Environment – Environmental policies regarding transport industry – Institutional framework and recent developments</b></p> <p>Transportation systems, from infrastructures to vehicle operations, have environmental impacts ranging from noise, the emission of pollutants to climate change. These impacts are thoroughly examined in the class and case studies are applied.</p> <p><b>Transport Planning and Policy</b></p> <p>The allocation, design, and construction of transport infrastructure and services as subject to careful planning, both by public and private agencies. Distinction between policy and planning since the former usually relates the strategies and goals while the latter refers to concrete actions.</p> <p><b>Cost benefit Analysis in Transport infrastructure investments – Guidelines on CBA by EU Investment framework</b></p> <p>Transport decision processes and the applied cost–benefit analysis (CBA) with benefits mainly relating to time-savings, and costs relating to infrastructure and maintenance costs.</p>
<b>Teaching Methodology:</b>	<p>Learning Management System (LMS) and Moodle platform is used for the communication with the students. All required and additional readings (e.g., books, articles, websites, newsletters, open educational resources, case studies, power point presentations, etc.) in combination with lecture notes are uploaded on the LMS.</p> <p>For the everyday communication with the students, videoconferencing via zoom platform is applied.</p> <p>The students are encouraged to communicate with their peers and their instructor, in order to take advantage of all available tools for the development of this course. Students are expected to participate to dynamic online interaction activities, via synchronous and asynchronous activities. Students are asked to participate, wherever appropriate, in class presentations and activities employing various tools such as discussion forums, and presentations, in order to interact, communicate and collaborate with other students and their instructor.</p> <p>The students are also expected to use various discussion and collaboration tools to coordinate and accomplish group work (e.g. essays, lesson plans, research reports, articles critique).</p>

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	<p>The teaching consists of lectures that we will introduce participants to the key concepts of the course in regards to contemporary issues of educational technology integration within educational administration and learning practices. Subsequently, the course is organized through group discussions and presentations regarding the concepts under investigation. Additionally, data bases and market examples through articles and case studies are presented and discussed through dynamic interactive lecturing.</p> <p>The students are expected to study, understand the use and employ various tools and applications related to the course issues examined; design and develop lesson plans and educational material and present them in class. The students are also expected to study, present and critically discuss academic articles regarding the concepts of the course.</p>
Bibliography	<p><u>Textbooks:</u></p> <ul style="list-style-type: none"> <li>• Jean-Paul Rodrigue, Claude Comtois and Brian Slack, The Geography of Transport Systems, Routledge, Taylor &amp; Francis Group, 2017.</li> <li>• Instructor's Notes and Presentations</li> </ul>
	<p><u>b) References:</u></p> <ul style="list-style-type: none"> <li>• The Routledge Handbook of Transport Economics, Jonathan Cowie, Stephen Ison, 2018</li> <li>• Puettman, C., Collaborative Planning in Intermodal Freight Transportation, Gabler, 2010</li> <li>• Francis Marleau Donais, Irène Abi-Zeid, E.OwenD. Waygood, Roxane Lavoie, A review of cost–benefit analysis and multicriteria decision analysis from the perspective of sustainable transport in project evaluation, EURO Journal on Decision Processes, Volume 7, Issues 3–4, 2019,</li> <li>• J. Mangan et al, Global Logistics and Supply Chain Management, Wiley, 2008.Kyle Bagwell &amp; Robert W. Staiger, The Economics of the World Trading System, MIT Press, 2003</li> <li>• Stuart Cole Applied Transport Economics: Policy, Management &amp; Decision Making, The Chartered Institute of Logistics and Transport, 2005</li> <li>• Kenneth J. Button Transport Economics EE 1993</li> </ul>

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	<p><u>c) Journals:</u></p> <ul style="list-style-type: none"><li>• Journal of Advanced Transportation</li><li>• Transport Reviews</li></ul>
Assessment:	<ul style="list-style-type: none"><li>• Mid Term Exam 20% (week 5)</li><li>• An individual Assignment and presentation in class 20% (week 9)</li><li>• Final written examination 60% (examination period by the end of the completion of the course)</li></ul>
Language:	English