

## MSc Applied Economics Specialization: Defence Economics and International Relations

### 1<sup>st</sup> Semester

MSc Applied Economics with specialization in Defence Economics and International Relations		
MODULES	TYPE	ECTS
Public Organizations Management	COMPULSORY	7
Public Economics	COMPULSORY	7
Defence Economics	COMPULSORY	7
International Relations & Strategy	COMPULSORY	7
Research Methodology Seminar I	COMPULSORY	2

## PUBLIC ORGANIZATIONS MANAGEMENT

1.GENERAL			
<b>SCHOOL</b>	SCHOOL OF ECONOMICS AND BUSINESS		
<b>DEPARTMENT</b>	DEPARTMENT OF ECONOMICS		
<b>LEVEL OF STUDIES</b>	POSTGRADUATE LEVEL		
<b>MODULE CODE</b>		<b>SEMESTER OF STUDY</b>	A
<b>MODULE TITLE</b>	PUBLIC ORGANIZATIONS MANAGEMENT		
<b>INDEPENDENT TEACHING ACTIVITIES</b>	<b>WEEKLY TEACHING HOURS</b>	<b>ECTS</b>	
	3 HOURS	7	
<b>TYPE OF MODULE</b>	COMPULSORY		
<b>PROREQUISITE MODULES:</b>	NO		
<b>LANGUAGE OF TEACHING AND TESTING:</b>	GREEK		
<b>THE MODULE IS OFFERED TO ERASMUS STUDENTS</b>	NO		
<b>MODULE'S URL</b>	<a href="https://eclass.uth.gr/courses/ECON_P_113/">https://eclass.uth.gr/courses/ECON_P_113/</a>		
2. LEARNING OUTCOMES			
<b>Learning Outcomes</b>			
<p>Upon completion of the course, participants are expected to:</p> <ul style="list-style-type: none"> <li>. Be able to set goals, plan and monitor activities on behalf of public organization</li> <li>a. understand the contemporary international reality in the public sector</li> <li>b. can identify good practices in public management</li> <li>c. understand and be able to manage the challenges within public organizations</li> <li>d. realize the value of the contribution of employees to the achievement of the objectives of public organizations</li> </ul>			
<b>General Competencies</b>			
<p>Upon successful completion of the module, students will develop and cultivate basic professional and social skills, namely:</p>			

- e. Search, analysis and synthesis of data and information, using necessary technologies
- f. Decision making
- g. Autonomous work
- h. Exercise criticism and self-criticism
- i. Promotion of free, creative, and inductive thinking

### 3. MODULE CONTENT

- j. Particularities of the public sector
- k. Programming
- l. Basic management theories
- m. The environment of the public sector
- n. Organizing in public organizations
- o. Communication in public organizations
- p. Leading in public organizations
- q. Controlling in public organizations
- r. Management of changes and innovations in public organizations
- s. Special issues in the administration of public organizations

### 4. TEACHING AND LEARNING METHODS EVALUATION

<b>TEACHING METHOD</b>	Mixed																					
<b>USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES</b>	Learning process support through the e-class online platform, email, MS TEAMS																					
<b>ORGANISATION OF TEACHING</b>	<p>More specifically, the workload of the module is analyzed as follows:</p> <table border="1"> <thead> <tr> <th>Type</th> <th>Description</th> <th>WORKLOAD (HOURS)</th> </tr> </thead> <tbody> <tr> <td></td> <td>Lectures</td> <td>39</td> </tr> <tr> <td></td> <td>Study at home</td> <td>120</td> </tr> <tr> <td></td> <td>Preparation for the final exam</td> <td>40</td> </tr> <tr> <td></td> <td>Final Examination</td> <td>2</td> </tr> <tr> <td></td> <td>Final Examination</td> <td>2</td> </tr> <tr> <td></td> <td>Total</td> <td>201</td> </tr> </tbody> </table>	Type	Description	WORKLOAD (HOURS)		Lectures	39		Study at home	120		Preparation for the final exam	40		Final Examination	2		Final Examination	2		Total	201
Type	Description	WORKLOAD (HOURS)																				
	Lectures	39																				
	Study at home	120																				
	Preparation for the final exam	40																				
	Final Examination	2																				
	Final Examination	2																				
	Total	201																				
<b>MODULE ASSESSMENT</b>	Written exam																					

5. RECOMMENDED BIBLIOGRAPHY	
<i>Suggested Bibliography:</i>	<p>Textbooks in Greek</p> <p>Πετρίδου, Ε. (2011). Διοίκηση-Μάνατζμεντ. Εκδόσεις Σοφία.</p> <p>Φαναριώτης, Π. (1999). Διοίκηση Δημοσίων Υπηρεσιών και Οργανισμών – Εισαγωγή στο Σύγχρονο Δημόσιο Μάνατζμεντ. Εκδόσεις Σταμούλη.</p> <p>Ραμματά, Μ. (2011). Σύγχρονη Ελληνική Δημόσια Διοίκηση. Εκδόσεις Κριτική.</p> <p>Μακρυδημήτρης, Α. (2009). Προσεγγίσεις στη Θεωρία των Οργανώσεων. Εκδόσεις Καστανιώτη.</p> <p>Μακρυδημήτρης, Α. &amp; Πραβίτα, Μ. (2012). Δημόσια Διοίκηση: Στοιχεία Διοικητικής Οργάνωσης. Εκδόσεις Σάκκουλα.</p> <p>Ρωσσίδης, Ι. (2013). Εφαρμογές του Επιχειρησιακού Μάνατζμεντ στην Ελληνική Δημόσια Διοίκηση. Εκδόσεις Σταμούλη.</p>

## PUBLIC ECONOMICS

1.GENERAL		
<b>SCHOOL</b>	SCHOOL OF ECONOMICS AND BUSINESS	
<b>DEPARTMENT</b>	DEPARTMENT OF ECONOMICS	
<b>LEVEL OF STUDIES</b>	POSTGRADUATE LEVEL	
<b>MODULE CODE</b>	<b>SEMESTER OF STUDY</b>	A
<b>MODULE TITLE</b>	PUBLIC ECONOMICS	
<b>INDEPENDENT TEACHING ACTIVITIES</b>	<b>WEEKLY TEACHING HOURS</b>	<b>ECTS</b>
	3 HOURS	7
<b>TYPE OF MODULE</b>	COMPULSORY	
<b>PROREQUISITE MODULES:</b>	NO	
<b>LANGUAGE OF TEACHING AND TESTING:</b>	GREEK	

<b>THE MODULE IS OFFERED TO ERASMUS STUDENTS</b>	NO
<b>MODULE'S URL</b>	<a href="https://applied.econ.uth.gr/courses/%ce%b4%ce%b7%ce%bc%cf%8c%cf%83%ce%b9%ce%b1-%ce%bf%ce%b9%ce%ba%ce%bf%ce%bd%ce%bf%ce%bc%ce%b9%ce%ba%ce%ae/">https://applied.econ.uth.gr/courses/%ce%b4%ce%b7%ce%bc%cf%8c%cf%83%ce%b9%ce%b1-%ce%bf%ce%b9%ce%ba%ce%bf%ce%bd%ce%bf%ce%bc%ce%b9%ce%ba%ce%ae/</a>
<b>2. LEARNING OUTCOMES</b>	
<b>Learning Outcomes</b>	
<p>Upon completion of the course, participants are expected to:</p> <ul style="list-style-type: none"> <li>○ understand in depth the government's interventionism in the economy, and also the aims and objectives this function serves</li> <li>○ analyze the economic effects of fiscal tools, namely spending &amp; taxation, on the economy and economic activity</li> <li>○ comprehend the role and effect of the context set by the EU and the eurozone environment with emphasis on the exercise of fiscal policy</li> <li>○ realize the constraints of fiscal policy and the relationship with the electoral and political cycle</li> </ul>	
<b>General Competencies</b>	
<p>The course aims to help students deepen and specialize their knowledge of public economics and the functioning of the government as a producer of public and social goods such as health, security, education, justice, national defense as well as issues relating to the exercise of fiscal policy.</p>	
<b>3. MODULE CONTENT</b>	
<p>The course focuses on the analysis of government intervention in the economy and the production of public and social goods, the exercise of fiscal policy, the critical examination of the aims and objectives of government intervention. Issues such as the fiscal budget, electoral cycle and fiscal policy, public choice theory and the conditions for government intervention in the economy to be socially beneficial, are examined.</p> <p>The main issues of the course include subjects such as: Theories on the role of the government, the nature and characteristics of public goods, fiscal budgeting: public expenditures and revenues with an emphasis on Greece, fiscal deficits and public debt with an emphasis on the case of Greece</p>	
<b>4. TEACHING AND LEARNING METHODS EVALUATION</b>	
<b>TEACHING METHOD</b>	Mixed
<b>USE OF INFORMATION AND COMMUNICATION</b>	The learning process is supported through the course's e-class online platform, the use of the official email of the department to

<b>TECHNOLOGIES</b>	communicate with students, and MSTEAMS																					
<b>ORGANISATION OF TEACHING</b>	<p>The lectures of the course takes place in the amphitheaters of the Department of Economics. Informational and learning material is distributed through the e-class platform.</p> <p>More specifically, the workload of the module is analyzed as follows:</p> <table border="1"> <thead> <tr> <th>Type</th> <th>Description</th> <th>WORKLOAD (HOURS)</th> </tr> </thead> <tbody> <tr> <td></td> <td>Lectures</td> <td>39</td> </tr> <tr> <td></td> <td>Study at home</td> <td>80</td> </tr> <tr> <td></td> <td>Completion of assignments</td> <td>50</td> </tr> <tr> <td></td> <td>Preperation for the final exam</td> <td>39</td> </tr> <tr> <td></td> <td>Final Examination</td> <td>2</td> </tr> <tr> <td></td> <td>Total</td> <td>210</td> </tr> </tbody> </table>	Type	Description	WORKLOAD (HOURS)		Lectures	39		Study at home	80		Completion of assignments	50		Preperation for the final exam	39		Final Examination	2		Total	210
Type	Description	WORKLOAD (HOURS)																				
	Lectures	39																				
	Study at home	80																				
	Completion of assignments	50																				
	Preperation for the final exam	39																				
	Final Examination	2																				
	Total	210																				
<b>MODULE ASSESSMENT</b>	Assignment (40%) and final exam (60%)																					
<b>5. RECOMMENDED BIBLIOGRAGHY</b>																						
<i>Suggested Bibliography:</i>	<ul style="list-style-type: none"> <li>○ Rosen, H., T. Gayer, B. Ράπανος, &amp; Γ. Καπλάνογλου (2009) Δημόσια Οικονομική, Τόμος Α&amp;Β Εκδόσεις Κριτική</li> <li>○ Stiglitz, J. (2009), Οικονομική του Δημόσιου Τομέα, Εκδόσεις Κριτική.</li> <li>○ Δαλαμάγκας, Β. (2003) Εισαγωγή στη Δημόσια Οικονομική, Εκδόσεις Κριτική</li> <li>○ Γεωργακόπουλος, Θ. (1997) Εισαγωγή στη Δημόσια Οικονομική, Εκδόσεις Μπένου</li> <li>○ Κόλλιας, Χ, &amp; Ζουμπουλάκης, Μ. (2021), <i>Εθνική άμυνα και εθνικά χρέη</i>. Gutenberg.</li> </ul>																					

## DEFENCE ECONOMICS

<b>1.GENERAL</b>	
<b>SCHOOL</b>	SCHOOL OF ECONOMICS AND BUSINESS
<b>DEPARTMENT</b>	DEPARTMENT OF ECONOMICS
<b>LEVEL OF STUDIES</b>	POSTGRADUATE LEVEL

<b>MODULE CODE</b>		<b>SEMESTER OF STUDY</b>	A
<b>MODULE TITLE</b>	Defence Economics		
<b>INDEPENDENT TEACHING ACTIVITIES</b>	<b>WEEKLY TEACHING HOURS</b>	<b>ECTS</b>	
	3 HOURS	7	
<b>TYPE OF MODULE</b>	COMPULSORY		
<b>PROREQUISITE MODULES:</b>	NO		
<b>LANGUAGE OF TEACHING AND TESTING:</b>	GREEK		
<b>THE MODULE IS OFFERED TO ERASMUS STUDENTS</b>	NO		
<b>MODULE'S URL</b>	<a href="https://applied.econ.uth.gr/courses/%ce%bf%ce%b9%ce%ba%ce%bf%ce%bd%ce%bf%ce%bc%ce%b9%ce%ba%ce%ae-%cf%84%ce%b7%cf%82-%ce%ac%ce%bc%cf%85%ce%bd%ce%b1%cf%82/">https://applied.econ.uth.gr/courses/%ce%bf%ce%b9%ce%ba%ce%bf%ce%bd%ce%bf%ce%bc%ce%b9%ce%ba%ce%ae-%cf%84%ce%b7%cf%82-%ce%ac%ce%bc%cf%85%ce%bd%ce%b1%cf%82/</a>		
<b>2. LEARNING OUTCOMES</b>			
<b>Learning Outcomes</b>			
<p>Upon completion of the course, participants are expected:</p> <ul style="list-style-type: none"> <li>▪ To have an in depth understanding of the relationship between the national economy and national defence and how it impacts the implementation of national defence policy from the perspective of the availability of resources needed to support and finance the defence efforts of a state.</li> <li>▪ To understand the role and importance of economic power in the international system and in international relations and how economic power shapes and influences the overall balance of power of state actors in the international system.</li> <li>▪ To understand the economic parameters that govern the operation of defense alliances and the burden sharing between allies with special emphasis on the NATO Alliance.</li> <li>▪ To have an in depth understanding of the role and importance of the national defence industrial base as the channel that links national defence with the domestic economy and its industrial and technological sectors.</li> <li>▪ To know and understand the issues related to Greek defence needs and the economic constraints in the production of effective deterrent military power.</li> </ul>			
<b>General Competencies</b>			
<p>The course aims to provide students with the knowledge and in-depth understanding of the relationship between the national economy and national defence, thus enabling them to competently understand and analyze the operation of the defence sector and the production of this public good given the omnipresent constraints that national economic capabilities invariably impose.</p>			

**3. MODULE CONTENT**

The course focuses on highlighting and analyzing the dependency links connecting national defence with the economy. Specifically, the bidirectional relationship of interdependence between these two main pillars underpinning states' power. The main axis of the course is the study of national defence using the analytical and methodological tools of economic science. It relates the production of the public good of defence and security to the productive capabilities of the economy, the availability of economic resources need for the production of defence and security, the inevitable opportunity costs that arise in the decision making process concerning the allocation of scarce resources, and also examines the impact of defence spending on key macroeconomic variables such as growth and investment. Topics presented and analyzed during the lectures include the demand function for military expenditure, arms races, the economic analysis of military alliances, the market – i.e. the production and trade - of weapons systems and defence capital equipment.

**4. TEACHING AND LEARNING METHODS EVALUATION**

<b>TEACHING METHOD</b>	Lectures, group discussions, presentations
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<b>USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES</b>	The learning process is supported through the extensive use of the course’s e-class platform where lecture notes and reading material are uploaded, emailing to communicate directly with students and the MSTEAMS online lectures platform.
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<b>ORGANISATION OF TEACHING</b>	Teaching takes place in the lecture rooms of the Department of Economics. Lecture notes and reading material is distributed through the course’s e-class. The workload of the module is as follows:																					
	<table border="1"> <thead> <tr> <th>Type</th> <th>Description</th> <th>WORKLOAD (HOURS)</th> </tr> </thead> <tbody> <tr> <td></td> <td>Lectures</td> <td>39</td> </tr> <tr> <td></td> <td>Study at home</td> <td>80</td> </tr> <tr> <td></td> <td>Completion of assignments</td> <td>20</td> </tr> <tr> <td></td> <td>Preparation for the final exam</td> <td>40</td> </tr> <tr> <td></td> <td>Final Examination</td> <td>2</td> </tr> <tr> <td></td> <td>Total</td> <td>181</td> </tr> </tbody> </table>	Type	Description	WORKLOAD (HOURS)		Lectures	39		Study at home	80		Completion of assignments	20		Preparation for the final exam	40		Final Examination	2		Total	181
	Type	Description	WORKLOAD (HOURS)																			
		Lectures	39																			
		Study at home	80																			
		Completion of assignments	20																			
		Preparation for the final exam	40																			
		Final Examination	2																			
	Total	181																				

<b>MODULE ASSESSMENT</b>	The module is assessed via a course assignment (20%) and a final examination 80%
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**5. RECOMMENDED BIBLIOGRAGHY**

<i>Suggested Bibliography:</i>	Textbooks:
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	<ul style="list-style-type: none"> <li>○ Kollias, C. (2017). <i>Defence Economics</i>. Tourikis Publications (in Greek)</li> <li>○ Kevork, E. &amp; C. Kollias (Eds) (2018). <i>Applied Economics Studies in Defence and Security</i>. University of Thessaly Publications (in Greek)</li> <li>○ M. Zouboulakis, M. &amp; C. Kollias (2021), <i>National Defence and Sovereign Debt in Greece</i>. Gutenberg (in Greek)</li> </ul> <p>Additionally, students are required to use for study material papers published in peer-reviewed international academic journals such as <i>Defence and Peace Economics; Peace Economics, Peace Science and Public Policy; The Economics of Peace and Security Journal</i>.</p>
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## INTERNATIONAL RELATIONS AND STRATEGY

1.GENERAL			
<b>SCHOOL</b>	SCHOOL OF ECONOMICS AND BUSINESS		
<b>DEPARTMENT</b>	DEPARTMENT OF ECONOMICS		
<b>LEVEL OF STUDIES</b>	POSTGRADUATE LEVEL		
<b>MODULE CODE</b>		<b>SEMESTER OF STUDY</b>	A
<b>MODULE TITLE</b>	International Relations and Strategy		
<b>INDEPENDENT TEACHING ACTIVITIES</b>	<b>WEEKLY TEACHING HOURS</b>	<b>ECTS</b>	
	3 HOURS	7	
<b>TYPE OF MODULE</b>	COMPULSORY		
<b>PREREQUISITE MODULES:</b>	NO		
<b>LANGUAGE OF TEACHING AND TESTING:</b>	GREEK		
<b>THE MODULE IS OFFERED TO ERASMUS STUDENTS</b>	NO		
<b>MODULE'S URL</b>	eclass.uth.gr		
2. LEARNING OUTCOMES			
Learning Outcomes			

<p>Upon completion of the course, participants are expected to:</p> <ul style="list-style-type: none"> <li>- understand the basic concepts and terms in the field of International Relations, defence and security</li> <li>- understand the interdependence of international economic and political phenomena</li> <li>- have an understanding of international law and the fundamental legal norms in the international system</li> <li>- understand the points of friction in Greek-Turkish relations</li> <li>- have an understanding of the content and the main evolutionary processes in the field of strategy</li> </ul>	
<p><b>General Competencies</b></p>	
<p>Adapting to new situations and responding to new challenges  Decision making ability  Capacity of working self-sufficiently  Teamwork ability  Working in an international environment  Working in an interdisciplinary environment  Generating new research ideas</p>	
<p><b>3. MODULE CONTENT</b></p>	
<p>The scope of this introductory course is to shape the theoretical background that would enable the students to understand and interpret the developments of the international politics. Therefore it analyses the role and the function of international institutions and regimes and basic diplomatic procedures. It also discusses basic terms of the discipline of the international relations and international law (State-Sovereignty and Recognition, Exclusive Economic Zone, Continental Shelf et. al.) as well as the main aspects of Greece's Foreign Policy. As the course serves as preparatory seminar to courses with similar content following in later semesters, it also examines the main schools of thinking within the discipline of International Relations: realism - neo-realism - idealism – liberalism, structuralism and so on. The Assessment of the course is based on a final oral or written exam.</p>	
<p><b>4. TEACHING AND LEARNING METHODS EVALUATION</b></p>	
<p><b>TEACHING METHOD</b></p>	<p>A balanced blend of formal and informal discussion, lecturing and assigning of home work</p>
<p><b>USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES</b></p>	<p>e-class and MS TEAMS</p>

<b>ORGANISATION OF TEACHING</b>	More specifically, the workload of the module is analyzed as follows:	
	Type	WORKLOAD (HOURS)
	Lectures	39
	Study at home	80
	Completion of assignments	50
	Preperation for the final exam	39
	Final Examination	2
	Total	210
<b>MODULE ASSESSMENT</b>	Oral or written exams	
<b>5. RECOMMENDED BIBLIOGRAGHY</b>		
<i>Suggested Bibliography:</i>	<ul style="list-style-type: none"> <li>- Antonio Cassese, Διεθνές Δίκαιο, εκδόσεις Gutenberg</li> <li>- Jill Steans-Loyd Pettiford, Εισαγωγή στις Διεθνείς Σχέσεις, εκδόσεις Κων. Τουρίκη</li> <li>- Ανδρέας Στεργίου, Η Ελληνοτουρκική Διένεξη στο Αιγαίο. Αντίσταση στο Μέλλον, εκδόσεις Κριτική</li> </ul>	

## RESEARCH METHODOLOGY SEMINAR I

<b>1.GENERAL</b>			
<b>SCHOOL</b>	SCHOOL OF ECONOMICS AND BUSINESS		
<b>DEPARTMENT</b>	DEPARTMENT OF ECONOMICS		
<b>LEVEL OF STUDIES</b>	POSTGRADUATE LEVEL		
<b>MODULE CODE</b>		<b>SEMESTER OF STUDY</b>	A
<b>MODULE TITLE</b>	Research Methodology seminar I		
<b>INDEPENDENT TEACHING ACTIVITIES</b>	<b>WEEKLY TEACHING HOURS</b>	<b>ECTS</b>	
		2	
<b>TYPE OF MODULE</b>	COMPULSORY		
<b>PROREQUISITE MODULES:</b>	NO		

<b>LANGUAGE OF TEACHING AND TESTING:</b>	GREEK
<b>THE MODULE IS OFFERED TO ERASMUS STUDENTS</b>	NO
<b>MODULE'S URL</b>	eclass.uth.gr
<b>2. LEARNING OUTCOMES</b>	
<p>Students will be able to do the following:</p> <ul style="list-style-type: none"> <li>- To plan a proper design of a research as well as the identification of the central question and the relative assumptions is a necessary precondition for the scientific analysis of any social and economic phenomenon.</li> <li>- To implement several research methods that based on (i) specific principles and concepts, (ii) selection of appropriate research tools concerning the preparation and implementation of the research (collection and organization of information in databases, sample, sampling procedures, questionnaires, and interviews) and finally (iii) tools and methods for evaluation and analysis of the collected data / information.</li> <li>- To understand the practice of empirical scientific research which, under an appropriate methodological design, ensures objective measurements and estimations of the examined phenomena and allows the systematic verification of the research's hypotheses.</li> </ul>	
<b>General Competencies</b>	
<ul style="list-style-type: none"> <li>• Research and analysis of complicate data with the use of the appropriate methods and tools</li> <li>• Capacity to develop autonomous work</li> <li>• Capacity to develop team work</li> <li>• Working in a multidisciplinary environment</li> <li>• Production of new innovative research ideas</li> </ul>	
<b>3.MODULE CONTENT</b>	
<p>The primary objective of this course is to provide students with adequate knowledge on the logical path of scientific research and the choice of appropriate methods – tools for the analysis of the potential development issues. This specialized knowledge gives to students the opportunity both to design and implement a research and to acquire critical thinking necessary to solve complex issue and problems.</p> <p>Consequently, the course includes the following:</p> <ol style="list-style-type: none"> <li>1. Concepts, principles, importance and purposes of scientific research</li> <li>2. Identification and formulation of the central problem (research question) and of the assumptions</li> <li>3. Investigation of the field, literature research</li> <li>4. Structuring the analysis concerning, investigation of data resources: central assumptions, main themes for investigation, identification of quantitative and / or qualitative variables in the model, selection of appropriate research method</li> <li>5. Specificities of primary and secondary research, search and selection of data sources</li> <li>6. Implementation of tools for primary research: sample, sample size, sampling methods, alternative forms of questionnaires, coding questions..</li> <li>7. Data entry technics and reliability tests</li> <li>8. Statistical analysis of data: (a) simple exploratory statistical analysis, (b) advanced exploratory analysis: Exploratory Factor Analysis (EFA) and Principal Component Analysis (PCA), (c) Confirmatory Factor Analysis (CFA), (d) regression and projections</li> <li>9.Verification of the main assumptions of the model, discussion on the findings as regards existing theories and approaches, drawing conclusions.</li> </ol>	

4. TEACHING AND LEARNING METHODS EVALUATION																			
<b>TEACHING METHOD</b>	Mixed (face to face and hybrid)																		
<b>USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES</b>	<ul style="list-style-type: none"> <li>➤ Use of e-platform, e-class</li> <li>➤ Use of Ms-Teams programme</li> </ul>																		
<b>ORGANISATION OF TEACHING</b>	<p>More specifically, the workload of the module is analyzed as follows:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">Type</th> <th style="width: 60%;">Description</th> <th style="width: 25%;">WORKLOAD (HOURS)</th> </tr> </thead> <tbody> <tr> <td></td> <td>Lectures</td> <td style="text-align: center;">20</td> </tr> <tr> <td></td> <td>Study at home</td> <td style="text-align: center;">15</td> </tr> <tr> <td></td> <td>Completion of assignments</td> <td style="text-align: center;">15</td> </tr> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">Total</td> <td style="text-align: center;">50</td> </tr> </tbody> </table>	Type	Description	WORKLOAD (HOURS)		Lectures	20		Study at home	15		Completion of assignments	15					Total	50
Type	Description	WORKLOAD (HOURS)																	
	Lectures	20																	
	Study at home	15																	
	Completion of assignments	15																	
	Total	50																	
<b>MODULE ASSESSMENT</b>	<p>Final grade is derives from:</p> <p>Writing a scientific assignment (100%) 4.000-6.000 words based on Scientifics articles</p>																		
5. RECOMMENDED BIBLIOGRAGHY																			
<i>Suggested Bibliography:</i>	<ul style="list-style-type: none"> <li>- Brotherton, B. (2008) Researching Hospitality and Tourism: A Student Guide, London και Thousand Oaks: Sage.</li> <li>- Δαφέρμος, Β. (2013), Παραγοντική ανάλυση: Διερευνητική με SPSS και επιβεβαιωτική με το LISREL και το AMOS, Θεσσαλονίκη: Ζήτη.</li> <li>- Ζαφειροπούλος, Κ. (2005), Πως γίνεται μια επιστημονική εργασία; Αθήνα: Κριτική.</li> <li>- Finn, M., Elliott-White, M., Walton. M. (2000) Research Methods for Leisure and Tourism, Harlow: Pearson Education.</li> <li>- Grawitz, M. (2006), Μέθοδοι των κοινωνικών επιστημών, Τόμος Α' και Β', Αθήνα: Οδυσσέας</li> </ul>																		

## 2<sup>nd</sup> Semester

<b>MSc Applied Economics with specialization in Defence Economics and International Relations</b>		
<b>MODULES</b>	<b>TYPE</b>	<b>ECTS</b>
Topics in the Economics and management of Defence and Security	COMPULSORY	7
International Political Economy	COMPULSORY	7
Space Economics	COMPULSORY	7
Selective module *	SELECTIVE	7
Research Methos Seminar II	COMPULSORY	2

<b>*Selective Modules – one of the following</b>		
<b>MODULES</b>	<b>ΕΙΔΟΣ ΜΑΘΗΜΑΤΟΣ</b>	<b>ECTS</b>
Labour Relations	ΕΠΙΛΟΓΗΣ	7
Measurement of Productivity and Efficiency	ΕΠΙΛΟΓΗΣ	7
Project Management	ΕΠΙΛΟΓΗΣ	7

## TOPICS IN THE ECONOMICS AND MANAGEMENT OF DEFENCE AND SECURITY

<b>1.GENERAL</b>		
<b>SCHOOL</b>	SCHOOL OF ECONOMICS AND BUSINESS	
<b>DEPARTMENT</b>	DEPARTMENT OF ECONOMICS	
<b>LEVEL OF STUDIES</b>	POSTGRADUATE LEVEL	
<b>MODULE CODE</b>		<b>SEMESTER OF STUDY</b> A
<b>MODULE TITLE</b>	Topics in the Economics and Management of Defence and Security	
<b>INDEPENDENT TEACHING ACTIVITIES</b>	<b>WEEKLY TEACHING HOURS</b>	<b>ECTS</b>
	3 HOURS	7
<b>TYPE OF MODULE</b>	COMPULSORY	
<b>PREREQUISITE MODULES:</b>	NO	
<b>LANGUAGE OF TEACHING AND TESTING:</b>	GREEK	
<b>THE MODULE IS OFFERED TO ERASMUS STUDENTS</b>	NO	
<b>MODULE'S URL</b>	<a href="https://applied.econ.uth.gr/courses/%ce%b5%ce%b9%ce%b4%ce%b9%ce%ba%ce%ac-%ce%b8%ce%ad%ce%bc%ce%b1%cf%84%ce%b1-%ce%bf%ce%b9%ce%ba%ce%bf%ce%bd%ce%bf%ce%bc%ce%b9%ce%ba%ce%ae%cf%82-%ce%b4%ce%b9%ce%bf%ce%b9%ce%ba%ce%b7%cf%84%ce%b9%ce%ba/">https://applied.econ.uth.gr/courses/%ce%b5%ce%b9%ce%b4%ce%b9%ce%ba%ce%ac-%ce%b8%ce%ad%ce%bc%ce%b1%cf%84%ce%b1-%ce%bf%ce%b9%ce%ba%ce%bf%ce%bd%ce%bf%ce%bc%ce%b9%ce%ba%ce%ae%cf%82-%ce%b4%ce%b9%ce%bf%ce%b9%ce%ba%ce%b7%cf%84%ce%b9%ce%ba/</a>	
<b>2. LEARNING OUTCOMES</b>		
<b>Learning Outcomes</b>		
<p>Through the thematically focused lectures of the course that address various topics in defence and security from an economics methodological and analytical perspective, the students of this module will study, discuss, and analyze themes and issues such as:</p> <ul style="list-style-type: none"> <li>▪ The historical links between economy and war starting from the classical times.</li> <li>▪ How political and economic institutions influence and affect in the policy formulation and outcome of defence and security policies focusing on issues of scarce resource allocation between competing needs in the national defence and security sector.</li> <li>▪ The economic parameters that govern the operation of the armed forces such as the life cycle costs of weapon systems, procurement decision making, the role of the national defence, technological and industrial base</li> <li>▪ Contemporary issues concerning the common European defense and security policy.</li> <li>▪ The economic analysis of crime and terrorism.</li> </ul>		

<ul style="list-style-type: none"> <li>▪ Cybersecurity</li> </ul>																						
<b>General Competencies</b>																						
<p>The course aims to provide students with the knowledge and in-depth understanding of the relationship between the national economy and national defence, thus enabling them to competently understand and analyze the operation of the defence sector and the production of this public good given the omnipresent constraints that national economic capabilities invariably impose.</p>																						
<b>3. MODULE CONTENT</b>																						
<p>The course builds on the knowledge base of previous modules and focuses on specialized topics within the broader field of defence and security. The topics are both of a contemporary nature focusing on themes that are of current interest as well as themes that adopt a long-term historical perspective. It aims to further build students' skill in the use and application of economic tools of analysis on various thematic areas related to the field of defense and security by connecting theoretical knowledge with applied analysis and practice.</p>																						
<b>4. TEACHING AND LEARNING METHODS EVALUATION</b>																						
<b>TEACHING METHOD</b>	Lectures, group discussions, presentations																					
<b>USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES</b>	The learning process is supported through the extensive use of the course's e-class platform where lecture notes and reading material are uploaded, emailing to communicate directly with students and the MSTEAMS online lectures platform.																					
<b>ORGANISATION OF TEACHING</b>	<p>Teaching takes place in the lecture rooms of the Department of Economics. Lecture notes and reading material is distributed through the course's e-class. The workload of the module is as follows:</p> <table border="1" data-bbox="560 1200 1278 1821"> <thead> <tr> <th>Type</th> <th>Description</th> <th>WORKLOAD (HOURS)</th> </tr> </thead> <tbody> <tr> <td></td> <td>Lectures</td> <td>39</td> </tr> <tr> <td></td> <td>Study at home</td> <td>60</td> </tr> <tr> <td></td> <td>Completion of assignment</td> <td>60</td> </tr> <tr> <td></td> <td>Preparation for the final assessment presentation &amp; examination</td> <td>10</td> </tr> <tr> <td></td> <td>Final Examination</td> <td></td> </tr> <tr> <td></td> <td>Total</td> <td>169</td> </tr> </tbody> </table>	Type	Description	WORKLOAD (HOURS)		Lectures	39		Study at home	60		Completion of assignment	60		Preparation for the final assessment presentation & examination	10		Final Examination			Total	169
Type	Description	WORKLOAD (HOURS)																				
	Lectures	39																				
	Study at home	60																				
	Completion of assignment	60																				
	Preparation for the final assessment presentation & examination	10																				
	Final Examination																					
	Total	169																				
<b>MODULE ASSESSMENT</b>	The module is assessed via course assignment (presentation and examination) 100%																					
<b>5. RECOMMENDED BIBLIOGRAGHY</b>																						



<i>Suggested Bibliography:</i>	<p>Reading and study material is primarily drawn from specialized papers and literature reviews published in peer-reviewed international academic journals such as <i>Defence and Peace Economics; Peace Economics, Peace Science and Public Policy; The Economics of Peace and Security Journal</i>.</p> <p>Additionally, reading material is drawn from books and textbooks such as:</p> <ul style="list-style-type: none"> <li>○ Kevork, E. &amp; C. Kollias (Eds) (2018). <i>Applied Economics Studies in Defence and Security</i>. University of Thessaly Publications (in Greek)</li> <li>○ Caruso, R. &amp; and A. Locatelli [Eds] (2014), <i>Understanding Terrorism. A Socio-Economic Perspective</i>, Emerald</li> <li>○ M. Zouboulakis, M. &amp; C. Kollias (2021), <i>National Defence and Sovereign Debt in Greece</i>. Gutenberg (in Greek)</li> <li>○ Brauer, J. &amp; H. van Tuyl (2008) <i>Castles, Battles, and Bombs</i>, University of Chicago Press</li> <li>○ Hartley, K. (2013) <i>The Economics of Defence Policy: A New Perspective</i>, Routledge</li> <li>○ Braddon, D. &amp; K. Hartley (2011) [Eds], <i>Handbook on the Economics of Conflict</i>, Edward Elgar</li> <li>○ Economou, M. (2018), <i>Economy, War and Institutions</i>, Enalios Publications (in Greek)</li> </ul>
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## INTERNATIONAL POLITICAL ECONOMY

1.GENERAL			
<b>SCHOOL</b>	SCHOOL OF ECONOMICS AND BUSINESS		
<b>DEPARTMENT</b>	DEPARTMENT OF ECONOMICS		
<b>LEVEL OF STUDIES</b>	POSTGRADUATE LEVEL		
<b>MODULE CODE</b>		<b>SEMESTER OF STUDY</b>	A
<b>MODULE TITLE</b>	International Political Economy		
<b>INDEPENDENT TEACHING ACTIVITIES</b>	<b>WEEKLY TEACHING HOURS</b>	<b>ECTS</b>	
	3 HOURS	7	
<b>TYPE OF MODULE</b>	COMPULSORY		
<b>PROREQUISITE MODULES:</b>	NO		
<b>LANGUAGE OF TEACHING AND TESTING:</b>	GREEK		
<b>THE MODULE IS OFFERED TO</b>	NO		

<b>ERASMUS STUDENTS</b>							
<b>MODULE'S URL</b>	<a href="https://applied.econ.uth.gr/courses/%b4%b9%b5%b8%ce%bd%ae%cf%82-%cf%80%bf%ce%bb%b9%cf%84%b9%ba%ae-%ce%bf%b9%ba%ce%bf%bd%ce%bf%bc%af%b1/">https://applied.econ.uth.gr/courses/%b4%b9%b5%b8%ce%bd%ae%cf%82-%cf%80%bf%ce%bb%b9%cf%84%b9%ba%ae-%ce%bf%b9%ba%ce%bf%bd%ce%bf%bc%af%b1/</a>						
<b>2. LEARNING OUTCOMES</b>							
<b>Learning Outcomes</b>							
<p>Upon completion of the course, participants are expected:</p> <ul style="list-style-type: none"> <li>▪ To understand the complex relationships between economy and politics that determine developments in the international system and interstate relations.</li> <li>▪ To know the historical process of development of the international economic and political system and the factors that have influenced globalization in various historical eras.</li> <li>▪ To understand the different and competing theoretical approaches of international political economy such as realism and liberalism.</li> <li>▪ To understand the potential long-term effects of current trends and changes in the international economic system.</li> </ul>							
<b>General Competencies</b>							
<p>The module probes into the complex interdisciplinary issues of international political economy by familiarizing students with fundamental concepts of the subject and the different levels of analysis of globalization, of the role of international organizations, the emergence of the modern global economic architecture and current trends and challenges that characterize the international system.</p>							
<b>3.MODULE CONTENT</b>							
<p>The course focuses on the analysis of the interconnection and interaction of economics and politics in the globalized international system. Through a historical lens, the dynamics and actors - state, non-state, international organizations - of the global political and economic scene that influence global political and economic developments and the governance of the international economy are approached in order to understand, on the one hand, the continuity and change that characterizes the international system and on the other hand the current trends recorded. Key axes of the analysis include the study of the evolution of economic institutions and their impact on the functioning of global economic systems and their historical evolution.</p>							
<b>4. TEACHING AND LEARNING METHODS EVALUATION</b>							
<b>TEACHING METHOD</b>	Lectures, group discussions, presentations						
<b>USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES</b>	The learning process is supported through the extensive use of the course's e-class platform where lecture notes and reading material are uploaded, emailing to communicate directly with students and the MSTEAMS online lectures platform.						
<b>ORGANISATION OF TEACHING</b>	<p>Teaching takes place in the lecture rooms of the Department of Economics. Lecture notes and reading material is distributed through the course's e-class. The workload of the module is as follows:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">Type</th> <th style="width: 60%;">Description</th> <th style="width: 25%;">WORKLOAD (HOURS)</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Type	Description	WORKLOAD (HOURS)			
Type	Description	WORKLOAD (HOURS)					

	<table border="1"> <tr> <td>Lectures</td> <td>39</td> </tr> <tr> <td>Study at home</td> <td>80</td> </tr> <tr> <td>Completion of assignments</td> <td>60</td> </tr> <tr> <td>Preparation for the assessment presentation &amp; examination</td> <td>10</td> </tr> <tr> <td>Final Examination</td> <td></td> </tr> <tr> <td>Total</td> <td>189</td> </tr> </table>	Lectures	39	Study at home	80	Completion of assignments	60	Preparation for the assessment presentation & examination	10	Final Examination		Total	189
Lectures	39												
Study at home	80												
Completion of assignments	60												
Preparation for the assessment presentation & examination	10												
Final Examination													
Total	189												
<b>MODULE ASSESSMENT</b>	The module is assessed via course assignment (presentation and examination) 100%												
<b>5. RECOMMENDED BIBLIOGRAGHY</b>													
<i>Suggested Bibliography:</i>	<p>Reading material is drawn from books and textbooks such as:</p> <ul style="list-style-type: none"> <li>○ Kondis, A. &amp; Ch. Tsardanides [Eds.] (2012) International Political Economy, Papazisis Publications (in Greek)\</li> <li>○ Siousiouras, P. &amp; K. Chazakis [Eds.] (2009) Globalization, European Union and Greece, Poiotita Publications (in Greek)</li> <li>○ Cohn, T. (2009) International Political Economy. Theory &amp; Practice. Gutenberg Publications (in Greek)</li> <li>○ Gilpin, R. (2004) Global Political Economy, Poiotita Publications (in Greek)</li> </ul> <p>Additionally, reading and study material is drawn from specialized papers and literature reviews published in peer-reviewed international academic journals.</p>												

### SPACE ECONOMICS

<b>1.GENERAL</b>		
<b>SCHOOL</b>	SCHOOL OF ECONOMICS AND BUSINESS	
<b>DEPARTMENT</b>	DEPARTMENT OF ECONOMICS	
<b>LEVEL OF STUDIES</b>	POSTGRADUATE LEVEL	
<b>MODULE CODE</b>		<b>SEMESTER OF STUDY</b> A
<b>MODULE TITLE</b>	Space Economics	
<b>INDEPENDENT TEACHING ACTIVITIES</b>	<b>WEEKLY TEACHING HOURS</b>	<b>ECTS</b>

	3 HOURS	7
<b>TYPE OF MODULE</b>	COMPULSORY	
<b>PREREQUISITE MODULES:</b>	NO	
<b>LANGUAGE OF TEACHING AND TESTING:</b>	GREEK	
<b>THE MODULE IS OFFERED TO ERASMUS STUDENTS</b>	NO	
<b>MODULE'S URL</b>	eclass.uth.gr	
<b>2. LEARNING OUTCOMES</b>		
<b>Learning Outcomes</b>		
<p>Following the successful completion of the module, students should be able to</p> <ul style="list-style-type: none"> <li>-Analyze the significance of the economic concepts of production cost and demand for the space sector and industry</li> <li>-Describe the impact of public policies on the space industry and exports</li> <li>-Highlight the interconnections across space policies and defence and security policies through time</li> </ul>		
<b>General Competencies</b>		
<p>Following the successful completion of the module, students should have acquired the following competencies</p> <p>Analytical methods of economic concepts of production cost, demand characteristics and market equilibrium</p> <p>Analytical methods of business methods for risk mitigation and public procurement, as well as classification of technology readiness levels in space programs</p>		
<b>3.MODULE CONTENT</b>		
<p>The module is based on application methods of economic theory on the space sector with emphasis on concepts associated with economics of technology, security and development, as well as business administration. The module examines the dynamic interactions evolving around the expansion of humankind in space commons, but also on areas of innovation and technology growth. The methodological approach employs tools of analysis from microeconomic theory, public economics, as well as political economy with the course offering an inter-disciplinary</p>		

approach with relevant elements from international space law, political science and business administration. The course provides for the interaction across economic applications with legal and political elements and organizations such as UNCLOS. In this context, the course further examines the role of the public sectors in an integrated approach from the high-level policies and collaborations, down to procurement and industrial policies. Finally, the module focuses also on the application of mechanisms towards incorporating innovation in business approaches.

**4. TEACHING AND LEARNING METHODS EVALUATION**

**TEACHING METHOD** | mixed

**USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES** | Support of learning approach through e-class, use of emails and MSTeams

**ORGANISATION OF TEACHING** | More specifically, the workload of the module is analyzed as follows:

Type	Description	WORKLOAD (HOURS)
	Lectures	39
	Study at home	80
	Completion of assignments	50
	Preperation for the final exam	39
	Final Examination	1
	Total	210

**MODULE ASSESSMENT** | Through assignments and presentations

**5. RECOMMENDED BIBLIOGRAGHY**

*Suggested Bibliography:* | -

**RESEARCH METHODS SEMINAR II**

**1.GENERAL**

**SCHOOL** | SCHOOL OF ECONOMICS AND BUSINESS

<b>DEPARTMENT</b>	DEPARTMENT OF ECONOMICS		
<b>LEVEL OF STUDIES</b>	POSTGRADUATE LEVEL		
<b>MODULE CODE</b>		<b>SEMESTER OF STUDY</b>	<b>A</b>
<b>MODULE TITLE</b>	Research Methods Seminar II		
<b>INDEPENDENT TEACHING ACTIVITIES</b>	<b>WEEKLY TEACHING HOURS</b>	<b>ECTS</b>	
Lectures and hands-on training	3 HOURS	2	
<b>TYPE OF MODULE</b>	COMPULSORY		
<b>PREREQUISITE MODULES:</b>	Research Methods Seminar I		
<b>LANGUAGE OF TEACHING AND TESTING:</b>	GREEK		
<b>THE MODULE IS OFFERED TO ERASMUS STUDENTS</b>	NO		
<b>MODULE'S URL</b>	<a href="https://eclass.uth.gr/courses/ECON_P_190/">https://eclass.uth.gr/courses/ECON_P_190/</a>		
<b>2. LEARNING OUTCOMES</b>			
<b>Learning Outcomes</b>			
<p>This seminar provides a comprehensive introduction of statistics for business and economics and an intensive, hands-on introduction to the principles and practice of data visualization. As a result of taking this course, the students should be able to: 1. Apply and interpret descriptive statistics. 2. Formulate, identify and apply inferential statistics. 3. Analyse the association of variables using regression and ANOVA analyses. 4. Conduct empirical work using statistical software and interpret results 5. Take their data from Excel into visualization software, transform it to easy-to-understand dynamic graphics and interactively explore what-if scenarios.</p>			
<b>General Competencies</b>			
<p>This course provides the elementary foundations in statistics as well as the prerequisites for understanding the trends and challenges in data analysis and visualization. The students will find the resources to learn the science behind data analysis, how businesses use data to their advantage. Utilizing the tools that support Business Intelligence can give organizations an edge, letting them make better, data-driven decisions.</p>			
<b>3.MODULE CONTENT</b>			
<b>Learning module 1: Statistical analyses using statistical package IBM SPSS Statistics</b>			

- Data import, data management
- Quantitative and qualitative variables, attributes, scales of measurement (nominal, ordinal, interval and ratio).
- Importing a survey questionnaire to SPSS
- Data Presentation: tabular and graphical. Statistical charts, crosstabulation and independence of data with special reference to attributes. Coding, missing values, conditional and arithmetic operations.
- Descriptive statistics: measures of central tendency, measures of dispersion.
- Inferential statistics. Basic statistical tests in SPSS. T-tests, analysis of variance (ANOVA), Chi-square test and contingency tables.
- Bivariate data: Definition, scatter diagram, simple, partial and multiple correlation, determine the strength of the correlation via the correlation coefficient. Simple and multiple linear regression. Multiple linear regression assumptions and diagnostics.

#### Learning module 2: Visual analytics

- Basic plotting and visualization. Statistical and specialty plots in Business Intelligence and Analytics Software Tableau.
- Best practices for creating different plot types, motion charts, interactive visualizations.
- Building, sharing and customizing automated reports including data, text and graphics.

#### 4. TEACHING AND LEARNING METHODS EVALUATION

<b>TEACHING METHOD</b>	In situ and online lectures with hands-on computer training classes.															
<b>USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES</b>	<p>Teaching and learning process will be enhanced by eclass, email and MSTEAMS.</p> <p>Software licenses (IBM SPSS Statistics and Tableau latest versions) are offered to students at the beginning of the course. After completing the course, students have free one-year Tableau licenses through “Tableau for Students software licensing program”.</p>															
<b>ORGANISATION OF TEACHING</b>	<p>The hands-on training is conducted in the Computer Lab. Hands-on exercises and relevant materials (software user manuals, e-books, dictionary of statistical terms, white papers) will be provided for students to try out the applications, and to experiment with data analysis and interpretation and analytical reasoning in reports.</p> <p>More specifically, the workload of the module is analyzed as follows:</p> <table border="1" data-bbox="560 1588 1278 2036"> <thead> <tr> <th>Type</th> <th>Description</th> <th>WORKLOAD (HOURS)</th> </tr> </thead> <tbody> <tr> <td></td> <td>Lectures</td> <td>39</td> </tr> <tr> <td></td> <td>Study at home</td> <td>10</td> </tr> <tr> <td></td> <td>Completion of assignments</td> <td>-</td> </tr> <tr> <td></td> <td>Preparation for the final exam</td> <td>9</td> </tr> </tbody> </table>	Type	Description	WORKLOAD (HOURS)		Lectures	39		Study at home	10		Completion of assignments	-		Preparation for the final exam	9
Type	Description	WORKLOAD (HOURS)														
	Lectures	39														
	Study at home	10														
	Completion of assignments	-														
	Preparation for the final exam	9														

	Final Examination	2
	Total	60
<b>MODULE ASSESSMENT</b>	Online exam in the classroom	
<b>5. RECOMMENDED BIBLIOGRAGHY</b>		
<i>Suggested Bibliography:</i>	<ul style="list-style-type: none"> <li>- Aljandali A. (2016). Quantitative Analysis and IBM® SPSS® Statistics. A Guide for Business and Finance. Springer Cham. Hardcover ISBN 978-3-319-45527-3 (e-book)</li> <li>- Cleophas, Ton J., Zwinderman, Aeilko H. (2015). SPSS for Starters and 2nd Levelers. Springer International Publishing, ISBNs 978-3-31-920599-1, 978-3-31-920600-4. (e-book)</li> <li>- Martin Lee Abbott (2016). Using Statistics in the Social and Health Sciences with SPSS® and Excel®. John Wiley &amp; Sons, Inc. Print ISBN: 9781119121046 Online ISBN: 9781119121077</li> <li>- Lind D. and Marchal W. and Wathen S. (2018). Statistical Techniques in Business and Economics, 17th Edition, McGraw Hill Education.</li> </ul>	

## Selective Modules

### LABOUR RELATIONS

<b>1.GENERAL</b>		
<b>SCHOOL</b>	SCHOOL OF ECONOMICS AND BUSINESS	
<b>DEPARTMENT</b>	DEPARTMENT OF ECONOMICS	
<b>LEVEL OF STUDIES</b>	POSTGRADUATE LEVEL	
<b>MODULE CODE</b>		<b>SEMESTER OF STUDY</b> B
<b>MODULE TITLE</b>	Labour Relations	
<b>INDEPENDENT TEACHING ACTIVITIES</b>	<b>WEEKLY TEACHING HOURS</b>	<b>ECTS</b>
Lectures – Exercises – Case studies	3 HOURS	7
<b>TYPE OF MODULE</b>	OPTIONAL	
<b>PROREQUISITE MODULES:</b>	NO	
<b>LANGUAGE OF TEACHING AND</b>	GREEK	



<b>TESTING:</b>	
<b>THE MODULE IS OFFERED TO ERASMUS STUDENTS</b>	NO
<b>MODULE'S URL</b>	eclass.uth.gr
<b>2. LEARNING OUTCOMES</b>	
<b>Learning Outcomes</b>	
<p>Upon successful completion of the module, students should:</p> <ul style="list-style-type: none"> <li>• Know and comprehend the basic theoretical and applied concepts of the labour relations scientific subject.</li> <li>• Understand the dynamic and complex contemporary working environment that shapes modern labour relations.</li> <li>• Be familiarized with the basic concepts regarding the personal and collective aspects of labour demand and labour supply.</li> <li>• Be familiarized with the way labour market institutions operate and affect contemporary labour markets.</li> <li>• Know the basic theoretical and empirical models and concepts in alternative dispute resolutions in the workplace.</li> <li>• Critically assess policy implications as well as the basic fundamental characteristics of the native labour market.</li> </ul>	
<b>General Competencies</b>	
<p>The labour relations subject is multidisciplinary and multidimensional with many scientific fields contributing in its understanding. Such fields are Labour Economics, Human Resource Management, Work Sociology and Labour Law. In general, the labour relations module focus on understanding the individual and collective dimensions and implications of the ways labour market demand and supply work. The students of the module will get familiarized with concepts and models from all the above academic fields with the aim to understand the ways labour relations formulate and operate in the contemporary, internationalized and competitive native labour markets. The basic competencies that the students should acquire from the lectures are:</p> <ul style="list-style-type: none"> <li>• Search, use and synthesize data and information necessary for decision making in the labour relations field, with the use of the necessary technological tools.</li> <li>• Decision making.</li> <li>• Individual homework.</li> <li>• Team homework.</li> <li>• Demonstration of social, work and ethical responsibility with respect to gender issues.</li> <li>• Development of free, creative and inferential thinking.</li> </ul>	
<b>3.MODULE CONTENT</b>	
<p>The basic aim of the module is to offer students with the knowledge on the ways contemporary labour relations are shaped between employers and employees, as well as to understand the way institutions mediate on these formulated labour relations.</p> <p>Labour relations in modern labour markets are more individualized and less collective due to the ongoing decrease of trade unions' power, the increased labour market competitiveness and the national fundamental labour market characteristics.</p>	

Based on the above, in the lectures there will be an extensive discussion and presentation of several issues regarding labour relations, starting with the theoretical economics framework of the way modern labour markets operate and focusing on the role of each implicated actor has in the labour market (such as the employees, employers, the state and the labour unions).

The lectures will also focus on issues related to work negotiations, employee demands and the means used to success in these demands, such as strikes. Under this framework, special focus will be given to alternative dispute resolution concepts that are discussed in the relevant literature such as mediation and the like. There will also be studied relevant work-related case studies of good practices and intense labour disputes, that occurred at the national and the international level.

Certain aspects of contemporary challenges that shape modern labour relations will also be presented such as the role of technology, the globalization, the clients, labour market discrimination and alternative pay schemes.

Performance in the module will be assessed with individual and team homework and final written exams.

#### 4. TEACHING AND LEARNING METHODS EVALUATION

<b>TEACHING METHOD</b>	Mixed																					
<b>USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES</b>	Use educational platforms for lectures such as MSTEAMS, email, eclass and the like.																					
<b>ORGANISATION OF TEACHING</b>	<p>The lectures will be held in the Economics Department, although the students have the option to participate online. The study material will be distributed through the module's eclass page.</p> <p>More specifically, the workload of the module is analyzed as follows:</p> <table border="1"> <thead> <tr> <th>Type</th> <th>Description</th> <th>WORKLOAD (HOURS)</th> </tr> </thead> <tbody> <tr> <td></td> <td>Lectures</td> <td>39</td> </tr> <tr> <td></td> <td>Study at home</td> <td>70</td> </tr> <tr> <td></td> <td>Completion of assignments</td> <td>40</td> </tr> <tr> <td></td> <td>Preperation for the final exam</td> <td>60</td> </tr> <tr> <td></td> <td>Final Examination</td> <td>01</td> </tr> <tr> <td></td> <td>Total</td> <td>210</td> </tr> </tbody> </table>	Type	Description	WORKLOAD (HOURS)		Lectures	39		Study at home	70		Completion of assignments	40		Preperation for the final exam	60		Final Examination	01		Total	210
Type	Description	WORKLOAD (HOURS)																				
	Lectures	39																				
	Study at home	70																				
	Completion of assignments	40																				
	Preperation for the final exam	60																				
	Final Examination	01																				
	Total	210																				
<b>MODULE ASSESSMENT</b>	<p>Assessment:</p> <ol style="list-style-type: none"> <li>1) Individual homework and/or team homework (40%),</li> <li>2) Final written exam (60%)</li> </ol>																					

5. RECOMMENDED BIBLIOGRAPHY	
<i>Suggested Bibliography:</i>	<ul style="list-style-type: none"> <li>- Boeri T., van Ours, J. (2021). The Economics of Imperfect Labour Markets. (eds.) Princeton University Press, pp. 736.</li> <li>- Dibben P., Gilton K., Skillman G. (2011). Employment Relations. CIPD Publications, pp. 368.</li> <li>- Jacobsen J. P., Skillman G. L. (2004). Labor Markets and Employment Relationships: A Comprehensive Approach. (eds.) Blackwell Publishing, USA, pp. 582.</li> <li>- Kearney R. C. (2011). Labour Relations in the Public Sector. (eds.) Taylor &amp; Francis, 4th ed., pp.406.</li> </ul>

## MEASUREMENT OF PRODUCTIVITY AND EFFICIENCY

1.GENERAL			
<b>SCHOOL</b>	SCHOOL OF ECONOMICS AND BUSINESS		
<b>DEPARTMENT</b>	DEPARTMENT OF ECONOMICS		
<b>LEVEL OF STUDIES</b>	POSTGRADUATE LEVEL		
<b>MODULE CODE</b>		<b>SEMESTER OF STUDY</b>	<b>B</b>
<b>MODULE TITLE</b>	MEASUREMENT OF PRODUCTIVITY AND EFFICIENCY		
<b>INDEPENDENT TEACHING ACTIVITIES</b>	<b>WEEKLY TEACHING HOURS</b>	<b>ECTS</b>	
Lectures - Exercises - Actions	3 HOURS	7	
<b>TYPE OF MODULE</b>	COMPULSORY		
<b>PREREQUISITE MODULES:</b>	NO		
<b>LANGUAGE OF TEACHING AND TESTING:</b>	GREEK		
<b>THE MODULE IS OFFERED TO ERASMUS STUDENTS</b>	NO		
<b>MODULE'S URL</b>	eclass.uth.gr		
2. LEARNING OUTCOMES			
<b>Learning Outcomes</b>			

<p>The course aims to provide students with the tools of applied economic analysis to be able to answer the following questions:</p> <ul style="list-style-type: none"> <li>• How can I determine the production function of an economic unit?</li> <li>• How can I measure the technical efficiency of organizations and other economic units?</li> <li>• How can I measure the productivity of organizations and other economic units?</li> <li>• How can I identify and propose optimization goals for the production process of organizations and other economic units?</li> </ul> <p>This course is designed to equip students with the knowledge and analytical skills necessary to address these questions in the context of economic analysis and optimization.</p>	
<p><b>General Competencies</b></p>	
<p>The student will have the ability to measure productivity and efficiency using the Data Envelopment Analysis (DEA) method. They will also be able to recognize, understand, and create Malmquist productivity indices and apply the measurement of technical efficiency to organizations and economic units such as banks, hotels, hospitals, and others.</p> <p>This indicates that the student will acquire skills related to advanced economic analysis techniques, particularly in the context of productivity and efficiency measurement in various types of organizations and economic entities.</p>	
<p><b>3. MODULE CONTENT</b></p>	
<p>The course consists of lectures with a particular emphasis on applied specialized topics in the economics of production. The central aim of the course is to understand fundamental concepts of economic production, with an emphasis on learning and applying methodologies for measuring productivity and efficiency in economic units and organizations.</p> <ul style="list-style-type: none"> <li>• Basic introductory concepts related to technology and scale efficiency.</li> <li>• Profit maximization theory and scale efficiency.</li> <li>• Production theory and production frontier analysis.</li> <li>• Parametric and non-parametric approaches to measuring production efficiency.</li> <li>• Measurement of productivity using the Malmquist index.</li> </ul> <p>This course covers a range of topics related to the economics of production, focusing on practical applications and measurement methodologies for productivity and efficiency in various economic units and organizations.</p>	
<p><b>4. TEACHING AND LEARNING METHODS EVALUATION</b></p>	
<p><b>TEACHING METHOD</b></p>	<p>in-person and remote activities or learning (hybrid)</p>

<b>USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES</b>	<p>"Supporting the learning process through the e-class electronic platform. Using email and Microsoft Teams."</p> <p>This statement indicates the use of electronic platforms and communication tools like email and Microsoft Teams to facilitate and enhance the learning process.</p>																		
<b>ORGANISATION OF TEACHING</b>	<p>More specifically, the workload of the module is analyzed as follows:</p> <table border="1" data-bbox="563 577 1278 1104"> <thead> <tr> <th>Type</th> <th>Description</th> <th>WORKLOAD (HOURS)</th> </tr> </thead> <tbody> <tr> <td></td> <td>Lectures</td> <td>39</td> </tr> <tr> <td></td> <td>Study at home</td> <td>80</td> </tr> <tr> <td></td> <td>Preparation for the final exam</td> <td>90</td> </tr> <tr> <td></td> <td>Final Examination</td> <td>1</td> </tr> <tr> <td></td> <td>Total</td> <td>210</td> </tr> </tbody> </table>	Type	Description	WORKLOAD (HOURS)		Lectures	39		Study at home	80		Preparation for the final exam	90		Final Examination	1		Total	210
Type	Description	WORKLOAD (HOURS)																	
	Lectures	39																	
	Study at home	80																	
	Preparation for the final exam	90																	
	Final Examination	1																	
	Total	210																	
<b>MODULE ASSESSMENT</b>	100% Individual Presentation of a Scientific Article.																		
<b>5. RECOMMENDED BIBLIOGRAPHY</b>																			
<i>Suggested Bibliography:</i>	<ul style="list-style-type: none"> <li>• Coelli, TJ, Rao, D.S.P., O'Donnell CJ, Battese GE. (2005). An introduction to efficiency and productivity analysis, Second edition, Springer.</li> <li>• Ray, S. C. (2004). Data envelopment analysis: theory and techniques for economics and operations research. Cambridge university press</li> <li>• Varian R. H. (1992). Microeconomic Analysis, Third edition, Norton.</li> </ul>																		

## PROJECT MANAGEMENT

<b>1.GENERAL</b>	
<b>SCHOOL</b>	SCHOOL OF ECONOMICS AND BUSINESS
<b>DEPARTMENT</b>	DEPARTMENT OF ECONOMICS

<b>LEVEL OF STUDIES</b>	POSTGRADUATE LEVEL		
<b>MODULE CODE</b>		<b>SEMESTER OF STUDY</b>	<b>B</b>
<b>MODULE TITLE</b>	Project Management		
<b>INDEPENDENT TEACHING ACTIVITIES</b>	<b>WEEKLY TEACHING HOURS</b>	<b>ECTS</b>	
Lectures – exercises - activities	3 HOURS	7	
<b>TYPE OF MODULE</b>	ELECTIVE		
<b>PREREQUISITE MODULES:</b>	NO		
<b>LANGUAGE OF TEACHING AND TESTING:</b>	GREEK		
<b>THE MODULE IS OFFERED TO ERASMUS STUDENTS</b>	NO		
<b>MODULE'S URL</b>	<a href="https://eclass.uth.gr/courses/ECON_P_114/">https://eclass.uth.gr/courses/ECON_P_114/</a>		
<b>2. LEARNING OUTCOMES</b>			
<b>Learning Outcomes</b>			
<p>On successful completion of the course students should be able to:</p> <ul style="list-style-type: none"> <li>• Identify, develop, classify and plan the desired change that will be carried out by the implementation of a project or program.</li> <li>• Quote, summarize and explain the concepts and the necessity of integrated management of all project's phases.</li> <li>• Use, resolve, combine and assess the importance of key parameters of each project.</li> <li>• Define and describe the limitations that each parameter has on the successful implementation of the project.</li> <li>• Obtain the composition of these parameters for the development of a management plan for these parameters in each phase of the project's life cycle.</li> <li>• Describe and develop the appropriate project selection method for a portfolio and/or project program.</li> <li>• Adequately organize, analyze, validate and assess project and program progress.</li> </ul>			
<b>General Competencies</b>			
The course aims to develop and cultivate the following general abilities of the students:			

- Search, analysis and synthesis of data and information, using the necessary technologies
- Autonomous work
- Teamwork
- Work in an interdisciplinary scientific environment
- Collaboration skills
- Communication skills

### 3. MODULE CONTENT

Introduction to Project Management - Historical references, concepts and definitions for project, program and portfolio - Why there are organizations that apply management by project - How are they different from other organizations - How do they work and what is their value - Organizations that support project management in the world and in Greece

Project Management Standards (PMI – IPMA – PM<sup>2</sup>)

Understanding the problematic of a Project - Defining Success and Failure in a Project – Project's Lifecycle - The Pillars of Project Management [Governance, Lifecycle, Processes, Techniques and Tools]

Stakeholder management - The Logical Framework Approach (LFA) - Project integration and Scope management

From design to scheduling (Building AoN - AoA project networks, Critical Path Method, PERT/CPM, time-cost trade-off in projects)

Resource requirements, resource availability, Resource Management, the Resource Constrained Project Scheduling Problem, resource balancing in the schedule.

Monitoring of project progress (monitoring), identification of risks (risk management), assessment of the progress of the financial and physical object of the project (Earned Value Management), Schedule Risk Analysis

### 4. TEACHING AND LEARNING METHODS EVALUATION

<b>TEACHING METHOD</b>	In class						
<b>USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES</b>	Learning process is supported through the e-class online platform. Use of email.						
<b>ORGANISATION OF TEACHING</b>	<p>The delivery of the course takes place in the halls of the Department of Economic Sciences. Informational material is distributed via the course page in the e-class. More specifically, the workload of the course is analyzed as follows: (indicative)</p> <table border="1"> <thead> <tr> <th>Description</th> <th>WORKLOAD (HOURS)</th> </tr> </thead> <tbody> <tr> <td>Lectures</td> <td>39</td> </tr> <tr> <td>Study at home</td> <td>80</td> </tr> </tbody> </table>	Description	WORKLOAD (HOURS)	Lectures	39	Study at home	80
Description	WORKLOAD (HOURS)						
Lectures	39						
Study at home	80						

	<table border="1"> <tr> <td>Completion of assignments</td> <td>50</td> </tr> <tr> <td>Preparation for the final exam</td> <td>39</td> </tr> <tr> <td>Final Examination</td> <td>2</td> </tr> <tr> <td>Total</td> <td>210</td> </tr> </table>	Completion of assignments	50	Preparation for the final exam	39	Final Examination	2	Total	210
Completion of assignments	50								
Preparation for the final exam	39								
Final Examination	2								
Total	210								
<b>MODULE ASSESSMENT</b>	<p>There are two (2) ways for the final mark:</p> <p>Options between A and obligatory B and C.</p> <p>A) One (1) group assignment (up to two people that counts for 50% of the total mark) or alternatively a final exam with development, calculation and multiple-choice questions (also counts for 50% of the total mark)</p> <p>B) Two mid-term exams (half an hour) with calculation questions (counts for 15% each, a total of 30%)</p> <p>C) Four short and one long-term group activities in-class tests (cumulative counts for 20% of the total score)</p> <p>The rating scale is: 1-10.</p>								
<b>5. RECOMMENDED BIBLIOGRAGHY</b>									
<i>Suggested Bibliography:</i>	<ul style="list-style-type: none"> <li>- Pinedo, M.L. (2008), Scheduling: Theory, Algorithms and Systems (3rd edition), Springer Science+Business Media, LLC</li> <li>- Rayner P. and Reiss G. (2012), Portfolio and Programme Management Demystified, Routledge ,second edition</li> <li>- Renz, P.S. (2007), Project Governance, Physica-Verlag Heidelberg</li> <li>- Schwindt, C. (2005), Resource Allocation in Project Management, Springer-Verlag Berlin Heidelberg</li> <li>- Tonchia, S. (2008), Industrial Project Management: Planning, Design and Construction, Springer-Verlag Berlin Heidelberg</li> </ul>								



### 3<sup>rd</sup> Semester

MODULE	TYPE	ECTS
DISSERTATION	COMPULSORY	30
<b>Alternative instead dissertation all the following modules</b>		
Financial Management	COMPULSORY	7
Technology Strategy	COMPULSORY	7
Data Analytics	COMPULSORY	7
Applied Economics Analysis	COMPULSORY	7
Research Methodology Seminar III	COMPULSORY	2

## DISSERTATION

1.GENERAL		
<b>MODULE TITLE</b>	DISSERTATION	
<b>INDEPENDENT TEACHING ACTIVITIES</b>	<b>WEEKLY TEACHING HOURS</b>	<b>ECTS</b>
		30
<b>TYPE OF MODULE</b>	SELECTIVE	
<b>PROREQUISITE MODULES::</b>	MODULES OF 1 <sup>ST</sup> AND 2 <sup>ND</sup> SEMESTER	
<b>LANGUAGE OF TEACHING AND TESTING:</b>	Greek, English	
<b>THE MODULE IS OFFERED TO ERASMUS STUDENTS</b>	No	
<b>MODULE'S URL</b>	<a href="http://eclass.uth.gr/eclass/courses">eclass.uth.gr/eclass/courses</a>	
2. LEARNING OUTCOMES		
<p>The main learning objective to be achieved during the completion of the master's thesis is for the student to develop the necessary knowledge background related to the critical understanding of the subject of the master's thesis, as well as the systematic application of research methodologies and techniques. Specifically, upon completion of the master's thesis, the student should demonstrate that:</p> <ul style="list-style-type: none"> <li>• Understands, critically evaluates, and applies techniques for defining and developing a research topic that constitutes a relevant research problem in the field of Applied Economics.</li> <li>• Selects and formulates specific research objectives and problems that exhibit (to some extent at a master's level) scientific originality and practical relevance.</li> <li>• Understands and assesses the relationships between research objectives-problems, scientific literature, research methodologies, data collection and analysis techniques, drawing conclusions, and ultimately methods for making managerial decisions.</li> <li>• Applies research search processes and engages in the critical review of scientific literature relevant to the research topic.</li> <li>• Conducts research and formulates conclusions that are understandable and lead to interesting results.</li> </ul>		

- Understands the differences between quantitative research and qualitative research strategies and applies them either independently or in combination, depending on the specific requirements of the research.
- Understands the advantages and disadvantages of research techniques, systematically applies research techniques, and documents the choices made.
- Relies on primary and/or secondary data, which are evaluated for sufficiency, reliability, and validity.
- Formulates understandable and useful conclusions that demonstrate knowledge of the subject and the ability to critically assess other relevant published research results.
- Understands and formulates limitations and weaknesses of the research work.
- Identifies possible directions for future research in the specific area and in accordance with the initial research objectives, and finally
- Broadens their overall knowledge background to enhance further research and professional pursuits.

### **General Competencies**

The postgraduate thesis aims for the student to develop, through a primarily personal research process and under the guidance of the supervisor, a thesis on the chosen subject-object proposed following a relevant proposal. The aforementioned thesis should present:

- A clearly defined contribution to the field of Applied Economics, either through the conduct of original research or through the examination and application of relevant theories and methodologies.
- A well-documented research methodology and the systematic application and utilization of appropriate techniques for data collection, analysis, and processing.
- Comprehensive knowledge of the research subject of the thesis, including the ability to critically evaluate relevant literature.

### **3. MODULE CONTENT**

The research objectives and the content of each postgraduate thesis (Master's thesis) should be relevant to the academic subject of the Master's program (MSc) and should fall within a specific academic field or areas of knowledge.

The research methods involve techniques for collecting and processing reliable data, as well as their documentation through scientific methods (e.g., field research, literature review, statistical analysis, etc.).

#### 4. TEACHING AND LEARNING METHODS EVALUATION

<b>TEACHING METHOD</b>	<p>During the semester in which the postgraduate thesis (MSc thesis) is being completed, the supervising Professor supports the student by providing, in the best guiding manner, the scientific knowledge and expertise in the specific subject of the thesis. This support aims to facilitate the student's gradual progress in writing the thesis.</p>																					
<b>USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES</b>	<p>Supporting the Learning Process through the e-class Electronic Platform</p>																					
<b>ORGANISATION OF TEACHING</b>	<p>More specifically, the workload of the course is analyzed as follows:</p> <table border="1" data-bbox="435 752 1270 1693"> <thead> <tr> <th>Type</th> <th>Description</th> <th>Workload(hours)</th> </tr> </thead> <tbody> <tr> <td>Lectures</td> <td>This concerns the lectures and presentations that will take place in the Research Methodology Seminar I &amp; II.</td> <td>2*20=40</td> </tr> <tr> <td>Preparation of an MSc thesis proposal</td> <td>Involves composing the proposal for the MSc thesis.</td> <td>20</td> </tr> <tr> <td>Preparation of Dissertation</td> <td>It concerns the time required for conducting case studies and implementing exercises, as previously mentioned (Assessment Method).</td> <td>536</td> </tr> <tr> <td>Final Examination</td> <td>It concerns the duration of the final examination</td> <td>1</td> </tr> <tr> <td>Participation in other activities</td> <td>Meetings with the Professor for Progress Feedback</td> <td>3</td> </tr> <tr> <td colspan="2" style="text-align: right;"><b>Σύνολο</b></td> <td><b>600</b></td> </tr> </tbody> </table>	Type	Description	Workload(hours)	Lectures	This concerns the lectures and presentations that will take place in the Research Methodology Seminar I & II.	2*20=40	Preparation of an MSc thesis proposal	Involves composing the proposal for the MSc thesis.	20	Preparation of Dissertation	It concerns the time required for conducting case studies and implementing exercises, as previously mentioned (Assessment Method).	536	Final Examination	It concerns the duration of the final examination	1	Participation in other activities	Meetings with the Professor for Progress Feedback	3	<b>Σύνολο</b>		<b>600</b>
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Final Examination	It concerns the duration of the final examination	1																				
Participation in other activities	Meetings with the Professor for Progress Feedback	3																				
<b>Σύνολο</b>		<b>600</b>																				
<b>MODULE ASSESSMENT</b>	<p>The MSc thesis is presented for public defense by the student. The thesis is evaluated by the supervisor and two assessors, who must collectively agree on the final grade for the postgraduate thesis, which may also be the average of the three grades.</p> <p>The evaluation criteria for the thesis include:</p> <ul style="list-style-type: none"> <li>• The significance of the contribution of the specific research to the academic subject of the MSc program.</li> </ul>																					

	<ul style="list-style-type: none"> <li>• Clear definition and significance of the research objectives.</li> <li>• Understanding of the research subject and the ability to critically evaluate and utilize relevant literature.</li> <li>• Understanding of research methodology, sufficiency of the research methodology, and systematic use of appropriate research techniques.</li> <li>• Completion of the research and the significance of the results and conclusions.</li> <li>• Writing style of the thesis and the technical presentation quality of the work, which should conform to citation style standards.</li> <li>• Presentation and public defense of the thesis.</li> </ul>
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## 5. RECOMMENDED BIBLIOGRAPHY

<b>Suggested Bibliography:</b>	<ul style="list-style-type: none"> <li>• <i>Calabrese R. L. (2012), Getting It Right: The Essential Elements of a Dissertation, 2nd Edition, Rowman &amp; Littlefield Education.</i></li> <li>• <i>Cohen L., Manion L., Morrison K. (2007), Research Methods in Education, 6th Edition, London &amp; New York, Routledge.</i></li> <li>• <i>Murray R. (2006), How to Write a Thesis, 2nd Edition, Berkshire, UK, Open University Press.</i></li> <li>• <i>Orna E. &amp; Stevens G. (2009), Managing Information for Research: Practical help in researching, writing and designing dissertations, 2nd Edition, Buckingham, UK, Open University Press.</i></li> <li>• <i>Saunders M., Thornhill M., Lewis, P. (2012), Research Methods for Business Students, 6th Edition, Harlow, Essex, UK, Pearson.</i></li> <li>• <i>Yin R. K. (1994), Case Study Research Design and Methods, 2nd Edition, London &amp; New Delhi, Sage.</i></li> <li>• <i>Bell J. (2007), Πως να συντάξετε μια Επιστημονική Εργασία: Οδηγός Ερευνητικής Μεθοδολογίας, Αθήνα, Εκδόσεις Μεταίχμιο.</i></li> <li>• <i>Eco U. (2001), Πως γίνεται μια Διπλωματική Εργασία, Αθήνα, Εκδόσεις Νήσος.</i></li> <li>• <i>Ζαφειρόπουλος Κ. (2015), Πως γίνεται μια Επιστημονική Εργασία: Επιστημονική Έρευνα και Συγγραφή Εργασιών, Αθήνα, Εκδόσεις Κριτική.</i></li> <li>• <i>Θεοφιλίδης Χ. (2005), Η Συγγραφή Επιστημονικής Εργασίας: Από τη Θεωρία στην Πράξη, Αθήνα, Εκδόσεις Τυπωθήτω-Δαρδανός.</i></li> <li>• <i>Μπέλλας Θ. (1998), Δομή και Γραφή της Επιστημονικής Εργασίας, Αθήνα, Εκδόσεις Ελληνικά Γράμματα.</i></li> <li>• <i>Μπουρλιάσκος Β. Γ. (2010), Πως γράφεται μια Επιστημονική Εργασία: Πρακτικός Οδηγός, Συγγραφή Επιστημονικής Εργασίας και Βιβλιογραφική Έρευνα, Αθήνα, Εκδόσεις Διόνικος.</i></li> </ul>
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	<ul style="list-style-type: none"> <li>• Τοκμακίδης Σ. Π. (2008), <i>Οδηγός για τη Συγγραφή Διπλωματικών Εργασιών</i>, Αθήνα, Ιατρικές Εκδόσεις Π. Χ. Πασχαλίδης.</li> </ul>
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**Alternatively, instead of dissertation the following four modules and the Seminar**

### FINANCIAL MANAGEMENT

1. GENERAL			
<b>SCHOOL</b>	SCHOOL OF ECONOMICS AND BUSINESS		
<b>DEPARTMENT</b>	DEPARTMENT OF ECONOMICS		
<b>LEVEL OF STUDIES</b>	POSTGRADUATE LEVEL		
<b>MODULE CODE</b>	(ECON_P_148)	<b>SEMESTER OF STUDY</b>	A
<b>MODULE TITLE</b>	FINANCIAL MANAGEMENT		
<b>INDEPENDENT TEACHING ACTIVITIES</b>	<b>WEEKLY TEACHING HOURS</b>	<b>ECTS</b>	
Lectures - Exercises	3 hours	7	
<b>TYPE OF MODULE</b>	COMPULSORY		
<b>PREREQUISITE MODULES:</b>	No		
<b>LANGUAGE OF TEACHING AND TESTING:</b>	GREEK		
<b>THE MODULE IS OFFERED TO ERASMUS STUDENTS</b>	No		
<b>MODULE'S URL</b>	eclass.uth.gr/		
2. LEARNING OUTCOMES			
<b>Learning Outcomes</b>			
The course of Financial Management is connected with the courses of Accounting, Finance, Investment Valuation, and Portfolio Management and is influential towards but also is influenced by			

these courses but in no case it is identical with them. On the contrary, Financial Management creatively adds to these fields.

### General Competencies

By fully attending this course, students will have created a clear, complete, and multi-prismatic perspective of the underlying theory and economic implications will be familiarized with the methods and the tools necessary to assess and critically evaluate investment plans, studying financial components scientifically, and reaching safe and accurate conclusions about the viability and the financial health of firms. They will have a clear perspective about the differences between fundamental and market evaluation and will be able to efficiently avoid the deviations from objective estimations that stem from the bias and subjectivity inherent in the majority of investors.

They will be able to judge whether it would be better to finance a specific investment by lending or by issuing new shares. They will also be able to detect and measure the most important determinants for safely estimating the value, the profitability, and the perspectives of a firm to grow. Moreover, they will become fluent in using the appropriate tools for reducing the risk emanating from the existing capital structure but also from default risk, exchange rate risk, etc. while also will develop capacities to better allocate the existing resources in order to achieve the best risk-adjusted return by taking into consideration the special features of the growth potentials as well as the possibilities to adjust prices to news regarding the specific investment.

### 3. MODULE CONTENT

This course primarily focuses on investment decision criteria based on the Net Present Value, the Future Value, and the discount rate. Moreover, it offers insights concerning how bonds function by focusing on the market value, the coupon rate, and the yield to maturity. Furthermore, it compares financing through lending with financing through issuing new shares and offers in depth analysis of the advantages and disadvantages of each decision concerning this dilemma. The percentage of re-capitalization, the profit holdings, the perspectives of growth, and the market share constitute the axis of this analysis. The basic financial ratios are analyzed that reflect the financial condition of the firm. Moreover, the role of the Assets, the Liabilities, and the Equity are analyzed, which are crucial for fighting deficits in balance sheets.

The second part of this course focuses on the concepts of performance and risk which are applied in alternative investments and constitute the basis of fundamental and technical analysis and for estimating the optimal weights of a range of alternative financial assets. Furthermore, the Fama-French 5-factor model is applied and the market efficiency theory is analyzed as well as the possibilities of viability and profitability that it can offer.

The third part of this course focuses on risk management (credit risk, exchange risk, country risk) and is based on the impacts of risk premia on the success of investments and on the difficulties they cause to the efficacy of Financial Management. Emphasis is given on the derivatives market that is employed for hedging against risk stemming from the unpredictability of market prices as these instruments are also adopted for speculative purposes.

### 4. TEACHING AND LEARNING METHODS EVALUATION

<b>TEACHING METHOD</b>	In-person and online
<b>USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES</b>	Teaching is supported by the e-class platform. Use of email, MSTEAMS

<b>ORGANISATION OF TEACHING</b>	<p>Teaching takes place in the classes of the Department of Economics. Informative material is distributed through the course's e-class webpage.</p> <p>.....</p> <p>More specifically, the workload can be divided as indicated below:</p> <table border="1" data-bbox="560 461 1273 1061"> <thead> <tr> <th>Type</th> <th>Description</th> <th>WORKLOAD (HOURS)</th> </tr> </thead> <tbody> <tr> <td>Lectures</td> <td></td> <td>39</td> </tr> <tr> <td>Study at home</td> <td></td> <td>68</td> </tr> <tr> <td>Completion of assignments</td> <td></td> <td>30</td> </tr> <tr> <td>Preparation for the final exam</td> <td></td> <td>70</td> </tr> <tr> <td>Final Examination</td> <td></td> <td>3</td> </tr> <tr> <td>Total</td> <td></td> <td>210</td> </tr> </tbody> </table>	Type	Description	WORKLOAD (HOURS)	Lectures		39	Study at home		68	Completion of assignments		30	Preparation for the final exam		70	Final Examination		3	Total		210
Type	Description	WORKLOAD (HOURS)																				
Lectures		39																				
Study at home		68																				
Completion of assignments		30																				
Preparation for the final exam		70																				
Final Examination		3																				
Total		210																				
<b>MODULE ASSESSMENT</b>	<p>Final examination (written) (70%) and individually-prepared writing task of the semester 4.000 words (30%)</p>																					
<b>5. RECOMMENDED BIBLIOGRAGHY</b>																						
<i>Suggested Bibliography:</i>	<ul style="list-style-type: none"> <li>Principles of Corporate Finance, Brealey, Myers, and Allen, Utopia editions, 2nd edition</li> <li>Papadamou S, and Siriopoulos C., 2015. Principles of Investment Valuation: Financial and Socio-economic perspective. [e-book.] Athens: Association of Greek Academic Libraries. Available at: <a href="http://hdl.handle.net/11419/4365">http://hdl.handle.net/11419/4365</a></li> </ul>																					

## TECHNOLOGY STRATEGY

<b>1.GENERAL</b>			
<b>SCHOOL</b>	SCHOOL OF ECONOMICS AND BUSINESS		
<b>DEPARTMENT</b>	DEPARTMENT OF ECONOMICS		
<b>LEVEL OF STUDIES</b>	POSTGRADUATE LEVEL		
<b>MODULE CODE</b>	<b>MA_41</b>	<b>SEMESTER OF STUDY</b>	<b>A</b>



<b>MODULE TITLE</b>	<b>Technology Strategy</b>		
<b>INDEPENDENT TEACHING ACTIVITIES</b>	<b>WEEKLY TEACHING HOURS</b>	<b>ECTS</b>	
Lectures – Course work	3 HOURS	7	
<b>TYPE OF MODULE</b>	COMPULSORY		
<b>PROREQUISITE MODULES:</b>	NO		
<b>LANGUAGE OF TEACHING AND TESTING:</b>	GREEK		
<b>THE MODULE IS OFFERED TO ERASMUS STUDENTS</b>	NO		
<b>MODULE'S URL</b>	eclass.uth.gr		
<b>2. LEARNING OUTCOMES</b>			
<b>Learning Outcomes</b>			
<p>Upon successful completion of the course, students will be able to understand the developments in the modern technology environment and plan appropriate policies and practices for their effective management. Students will be able to:</p> <ul style="list-style-type: none"> <li>• Understand the interaction between economics and technology</li> <li>• Connect theoretical knowledge with technological and business reality</li> <li>• Recognize the primary importance of innovation and organizational learning</li> <li>• Understand the world of intellectual property (IP)</li> <li>• Understand the basic functions of Technology Strategy</li> <li>• Implement individual tools, policies and practices of Technology Strategy</li> </ul>			
<b>General Competencies</b>			
<ul style="list-style-type: none"> <li>• Understanding how the theories of Economics of Technology and Technology Strategy apply to the modern economic environment.</li> <li>• Solving practical problems encountered in the technologically fluid business environment.</li> <li>• Planning of Technology Strategy policies and practices</li> <li>• Improving the ability of students to communicate, collaborate and lead on issues of technology and innovation.</li> <li>• Teamwork</li> <li>• Perception of the innovative capabilities of the business</li> </ul>			
<b>3. MODULE CONTENT</b>			
<p><b>Technical change and economic development (Economics of knowledge and innovation: key concepts)</b></p> <ul style="list-style-type: none"> <li>• Innovation and Technical Change</li> <li>• Industrial and technological revolutions, techno-economic paradigms</li> <li>• Knowledge, technology, innovation and entrepreneurship</li> </ul>			

- Diffusion of innovation and path dependence
- Disruptive innovation, Socio-technical Systems and Socio-technical Transition

#### **Economics of technology**

- Business knowledge creation process
- Path Dependence and Absorptive Capacity

#### **Technology Strategy**

- Types of Technology Strategy
- Levels of Technology Strategy Development
- Tools and Methods for Developing Innovative Skills
- Architectural innovation
- Technology platforms and ecosystem strategies
- Modularity
- Product platforms
- Reasons for failure of large companies
- Technology alliance strategies

#### **Technology and Business strategy**

- Fundamental skills
- Leveraging innovation, complementary assets, and appropriability regimes
- Co-opetitive games and platform strategy

#### **Intellectual Property and exploitation of innovation**

The framework for the study and analysis of intellectual property

- Intangible assets:
  - Intangible assets investment
- Intellectual Property Rights (IPRs):
  - Intellectual Property Protection
  - Patents
- IP institutions and mechanisms (OBI, EPO, WIPO, etc.)
- Intellectual Property Management – Strategies

#### **Technology Strategy Planning**

- Technology Foresight
- Technology Monitoring
- Scenario development and analysis
- Technology Road-Map (TRM)

### **4. TEACHING AND LEARNING METHODS EVALUATION**

<b>TEACHING METHOD</b>	Mixed/Hybrid						
<b>USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES</b>	Learning process support through the e-class online platform. Use email, MS TEAMS.						
<b>ORGANISATION OF TEACHING</b>	<p>The course delivery takes place in the rooms of the Department of Economics. Informational material is distributed through the course page in the e-class platform and the course channel in MS Teams.</p> <p>More specifically, the workload of the module is analyzed as follows:</p> <table border="1"> <thead> <tr> <th>Type</th> <th>Περιγραφή</th> <th>WORKLOAD (HOURS)</th> </tr> </thead> <tbody> <tr> <td>Lectures</td> <td></td> <td>39</td> </tr> </tbody> </table>	Type	Περιγραφή	WORKLOAD (HOURS)	Lectures		39
Type	Περιγραφή	WORKLOAD (HOURS)					
Lectures		39					

	<table border="1"> <tr> <td>Home study</td> <td>78</td> </tr> <tr> <td>Completion of assignments</td> <td>50</td> </tr> <tr> <td>Preparation for final exam</td> <td>40</td> </tr> <tr> <td>Final Examination</td> <td>3</td> </tr> <tr> <td>Total</td> <td>210</td> </tr> </table>	Home study	78	Completion of assignments	50	Preparation for final exam	40	Final Examination	3	Total	210
Home study	78										
Completion of assignments	50										
Preparation for final exam	40										
Final Examination	3										
Total	210										
<b>MODULE ASSESSMENT</b>	<p>In-course assignments 30%</p> <p>Final course essay 70%</p>										
<b>5. RECOMMENDED BIBLIOGRAGHY</b>											
<i>Suggested Bibliography:</i>	<p>Bessant J και Tidd J. (2017) Καινοτομία και Επιχειρηματικότητα, 3η Αγγλική Έκδοση, Εκδόσεις Τζιόλα (in Greek)</p> <p>Schilling, M. A. (2017) Η Στρατηγική Διοίκηση της Τεχνολογικής Καινοτομίας, 4η Αγγλική Έκδοση, Broken Hill (in Greek) </p> <p>Tidd J. and Bessant J. (2018) Στρατηγική Διοίκηση Καινοτομίας, Broken Hill (in Greek)</p> <p>White M. and Bruton G. (2010) Η στρατηγική διαχείριση της τεχνολογίας και της καινοτομίας. Κριτική (in Greek)</p> <p>Σπαής Γ. (2007) Εισαγωγή στη Διαχείριση Τεχνολογικών Καινοτομιών, Κριτική (in Greek)</p> <p>Dodgson M., Gann D.M., and Salter A. (2008) The Management of Technological Innovation, Oxford University Press</p> <p>Dodgson M., Gann D., and Salter A. (2005) Think, Play, Do: Innovation, Technology, and Organization: Technology, Innovation, and Organization, Oxford University Press</p> <p>Nonaka I. and Takeuchi H. (1995) The Knowledge-Creating Company: How Japanese Companies Create the Dynamics of Innovation, Oxford University Press</p>										

## DATA ANALYTICS

<b>1.GENERAL</b>		
<b>SCHOOL</b>	SCHOOL OF ECONOMICS AND BUSINESS	
<b>DEPARTMENT</b>	DEPARTMENT OF ECONOMICS	
<b>LEVEL OF STUDIES</b>	POSTGRADUATE LEVEL	
<b>MODULE CODE</b>	<b>SEMESTER OF STUDY</b>	A
<b>MODULE TITLE</b>	Data Analytics	
<b>INDEPENDENT TEACHING ACTIVITIES</b>	<b>WEEKLY TEACHING HOURS</b>	<b>ECTS</b>
Lectures - exercises - practices	3 HOURS	7
<b>TYPE OF MODULE</b>	COMPULSORY	
<b>PREREQUISITE</b>	NO	

<b>MODULES:</b>	
<b>LANGUAGE OF TEACHING AND TESTING:</b>	GREEK
<b>THE MODULE IS OFFERED TO ERASMUS STUDENTS</b>	NO
<b>MODULE'S URL</b>	eclass.uth.gr
<b>2. LEARNING OUTCOMES</b>	
<b>Learning Outcomes</b>	
<p>After the successful completion of the course, the student should be able to:</p> <ul style="list-style-type: none"> <li>• Understand the basic algorithms used in Data Analytics.</li> <li>• Utilize the features of the Python programming language and the packages of the statistical computing language R for data analysis in financial models and business applications.</li> <li>• Apply data analysis techniques to business applications and in finance.</li> <li>• Comprehend the fundamental methods of handling Big Data.</li> <li>• Utilizes Artificial Intelligence and Machine Learning algorithms.</li> </ul>	
<b>General Competencies</b>	
<p>The course "Data Analytics" aims to familiarize students with modern technologies and available tools for data management, processing, and analysis. Special emphasis is placed on business and financial applications of Data Analytics. The focus of the course is twofold. Students are taught on a theoretical level the basic algorithms of Data Analytics, while simultaneously using them in various financial and business examples, developing applications in Python and R.</p>	
<b>3. MODULE CONTENT</b>	
<p>Introduction to Data Analytics.  Applications of Data Analytics in Economics and Finance.  Data Collection and Preparation.  Portfolio Analysis and Visualization of Results.  Time Series Forecasting in Finance.  Predictive Modeling, Correlation, and Segmentation.  Model Adaptation to Data. Addressing the Overfitting Problem.  Similarity, Neighbors, and Clusters.</p>	

<p>Artificial Intelligence, Machine Learning, and Deep Learning in Finance.          Big Data in Business .          Practical Examples in Python and R.</p>																						
<b>4. TEACHING AND LEARNING METHODS EVALUATION</b>																						
<b>TEACHING METHOD</b>	Onsite / Remote / Hybrid																					
<b>USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES</b>	Support of the learning process through the eClass platform the unified e-learning system of the University of Thessaly which is supported by the Library and Information Centre and MSTEAMS platform for education.																					
<b>ORGANISATION OF TEACHING</b>	<p>More specifically, the workload of the module is analyzed as follows:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type</th> <th style="text-align: left;">Description</th> <th style="text-align: right;">WORKLOAD (HOURS)</th> </tr> </thead> <tbody> <tr> <td></td> <td>Lectures</td> <td style="text-align: right;">39</td> </tr> <tr> <td></td> <td>Study at home</td> <td style="text-align: right;">80</td> </tr> <tr> <td></td> <td>Completion of assignments</td> <td style="text-align: right;">50</td> </tr> <tr> <td></td> <td>Preparation for the final exam</td> <td style="text-align: right;">39</td> </tr> <tr> <td></td> <td>Final Examination</td> <td style="text-align: right;">2</td> </tr> <tr> <td></td> <td>Total</td> <td style="text-align: right;">210</td> </tr> </tbody> </table>	Type	Description	WORKLOAD (HOURS)		Lectures	39		Study at home	80		Completion of assignments	50		Preparation for the final exam	39		Final Examination	2		Total	210
Type	Description	WORKLOAD (HOURS)																				
	Lectures	39																				
	Study at home	80																				
	Completion of assignments	50																				
	Preparation for the final exam	39																				
	Final Examination	2																				
	Total	210																				
<b>MODULE ASSESSMENT</b>	<p>Evaluation Method:</p> <ul style="list-style-type: none"> <li>- Individual Programming Exercises: 30%</li> <li>- Written Examination: 70%</li> </ul>																					
<b>5. RECOMMENDED BIBLIOGRAGHY</b>																						
<i>Suggested Bibliography:</i>	<ul style="list-style-type: none"> <li>• Foster Provost and Tom Fawcett, "Data Science for Business", Edited by Vasilis Verykios, Klidarithmos Publications.</li> <li>• Eryk Lewinson, Python for Finance Cookbook. Packt Publishing.</li> <li>• Taddy Matt, Hendrix Leslie, Harding Matthew, Modern Business Analytics. McGraw Hill</li> <li>• Paul Deitel and Harvey Deitel, "Introduction to Python for Computer Science and Data", M. Gyuras Publishing.</li> <li>• Dimitrios Karolidis, "Learn Python Easily", Avakas Publishing.</li> <li>• Gareth James, Daniela Witten, Trevor Hastie, Robert Tibshirani (2021). "An Introduction to Statistical Learning with Applications in R". ISBN: 978-1-0716-1417-4 Springer. (Free e-</li> </ul>																					

	<p>book, Access provided by HEAL-Link Greece - University of Thessaly)</p> <ul style="list-style-type: none"> <li>Vasilios S. Verykios, Vasilios Kanglis, Elias K. Stavropoulos, "Data Science through the R Language", Available on Kallipos platform.</li> </ul>
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## APPLIED ECONOMIC ANALYSIS

1.GENERAL		
<b>SCHOOL</b>	SCHOOL OF ECONOMICS AND BUSINESS	
<b>DEPARTMENT</b>	DEPARTMENT OF ECONOMICS	
<b>LEVEL OF STUDIES</b>	POSTGRADUATE LEVEL	
<b>MODULE CODE</b>		<b>SEMESTER OF STUDY</b> A
<b>MODULE TITLE</b>	APPLIED ECONOMIC ANALYSIS	
<b>INDEPENDENT TEACHING ACTIVITIES</b>	<b>WEEKLY TEACHING HOURS</b>	<b>ECTS</b>
LECTURES	3 HOURS	7
<b>TYPE OF MODULE</b>	COMPULSORY	
<b>PROREQUISITE MODULES:</b>	NO	
<b>LANGUAGE OF TEACHING AND TESTING:</b>	GREEK	
<b>THE MODULE IS OFFERED TO ERASMUS STUDENTS</b>	NO	
<b>MODULE'S URL</b>	<a href="https://eclass.uth.gr/courses/ECON_P_187/">https://eclass.uth.gr/courses/ECON_P_187/</a>	
2. LEARNING OUTCOMES		
<b>Learning Outcomes</b>		
<p>Upon completion of the course, participants are expected to:</p> <ul style="list-style-type: none"> <li>○ understand sufficiently the basic economic concepts concerning the markets, the sectors of government's policy in the economy, and also fundamentals of the money markets and international transactions</li> <li>○ distinguish and apprehend the interdependence between internal and external factors of</li> </ul>		

markets																						
<b>General Competencies</b>																						
<p>The course aims to introduce in a critical way the basics of contemporary Economic Analysis. Emphasis is given on the fundamental problems of the operation of the markets on the micro and the macro level. The course demands little or no previous knowledge of economics.</p> <p>The course focuses on the conceptual aspects of economic reasoning and not on the theoretical or mathematical demonstrations of economic theorems, in a way to make students able to understand the major aspects of the functioning of markets, their failures and remedies.</p>																						
<b>3. MODULE CONTENT</b>																						
<p>A) MICROECONOMIC THEORY: Demand and supply theory, Cost and production analysis, Forms of competition, Market Failures, Theory and Evolution of Firms, Transaction Costs Theory.</p> <p>B) FUNDAMENTAL MACROECONOMIC INDICATORS- BALANCE OF TRADE AND CURRENT TRADE BALANCE</p> <p>C) MONETARY THEORY AND POLICY</p>																						
<b>4. TEACHING AND LEARNING METHODS EVALUATION</b>																						
<b>TEACHING METHOD</b>	Mixed																					
<b>USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES</b>	The learning process is supported through the course's e-class online platform, the use of the official email of the department to communicate with students, and MSTEAMS																					
<b>ORGANISATION OF TEACHING</b>	<p>The lectures of the course takes place in the amphitheaters of the Department of Economics. Informational and learning material is distributed through the e-class platform.</p> <p>More specifically, the workload of the module is analyzed as follows:</p> <table border="1" data-bbox="560 1384 1278 1962"> <thead> <tr> <th>Type</th> <th>Description</th> <th>WORKLOAD (HOURS)</th> </tr> </thead> <tbody> <tr> <td></td> <td>Lectures</td> <td>39</td> </tr> <tr> <td></td> <td>Study at home</td> <td>60</td> </tr> <tr> <td></td> <td>Completion of assignments</td> <td>40+2</td> </tr> <tr> <td></td> <td>Preperation for the final exam</td> <td>36</td> </tr> <tr> <td></td> <td>Final Examination</td> <td>3</td> </tr> <tr> <td></td> <td>Total</td> <td>180</td> </tr> </tbody> </table>	Type	Description	WORKLOAD (HOURS)		Lectures	39		Study at home	60		Completion of assignments	40+2		Preperation for the final exam	36		Final Examination	3		Total	180
Type	Description	WORKLOAD (HOURS)																				
	Lectures	39																				
	Study at home	60																				
	Completion of assignments	40+2																				
	Preperation for the final exam	36																				
	Final Examination	3																				
	Total	180																				
<b>MODULE ASSESSMENT</b>	Two compulsory tests (40%), Participation (10%), final exam (50%)																					

5. RECOMMENDED BIBLIOGRAGHY	
<i>Suggested Bibliography:</i>	<ul style="list-style-type: none"> <li>○ Βαρουφάκης, Γ. (2007), Πολιτική Οικονομία, Αθήνα, Gutenberg.</li> <li>○ Bowles S, R. Edwards, &amp; F. Roosevelt, (2005), Κατανοώντας τον Καπιταλισμό, ελλ. μτφ Αθήνα, Gutenberg 2014, Επιμέλεια μτφ Μ. Ζουμπουλάκης.</li> <li>○ Krugman, P. &amp; R. Robin (2014), Μακροοικονομική σε διδακτικές ενότητες, ελλ. μτφ Αθήνα, Gutenberg 2018.</li> <li>○ Nicholson, W., (2005), Μικροοικονομική Θεωρία, ελλ. μτφ. Εκδ. Κριτική, 2008.</li> <li>○ Mankiw, G., Taylor, M.P and Ashwin, A. (2012) Οικονομική των επιχειρήσεων, ελλ. μτφ. Εκδ. Κριτική, 2018</li> </ul>

### RESEARCH METHODOLOGY SEMINAR III

1.GENERAL			
<b>SCHOOL</b>	SCHOOL OF ECONOMICS AND BUSINESS		
<b>DEPARTMENT</b>	DEPARTMENT OF ECONOMICS		
<b>LEVEL OF STUDIES</b>	POSTGRADUATE LEVEL		
<b>MODULE CODE</b>		<b>SEMESTER OF STUDY</b>	C
<b>MODULE TITLE</b>	Research Methodology III		
<b>INDEPENDENT TEACHING ACTIVITIES</b>	<b>WEEKLY TEACHING HOURS</b>	<b>ECTS</b>	
Lectures - Exercises – Practices- Use of EXCEL and R programming language	3 HOURS	7	
<b>TYPE OF MODULE</b>	COMPULSORY		
<b>PROREQUISITE MODULES:</b>	NO		
<b>LANGUAGE OF TEACHING AND TESTING:</b>	GREEK		
<b>THE MODULE IS OFFERED TO ERASMUS STUDENTS</b>	NO		
<b>MODULE'S URL</b>	eclass.uth.gr		



## 2. LEARNING OUTCOMES

### Learning Outcomes

The teaching of the course " Research Methodology III " aims to:

- Familiarize students with the necessary knowledge and techniques that enable researchers of economic phenomena to quantify and estimate economic relationships governing the operation of economic units and markets using statistical methods.
- Equip students with the necessary tools for verifying and evaluating econometric models and conducting forecasts.
- Introduce students to the analysis of time series data.

By the end of the course, students should be able to:

- Specialize and select an econometric model.
- Estimate a classic linear model.
- Test, examine, and evaluate an econometric model.
- Evaluate and address issues related to violations of the assumptions of a model.
- Design, estimate, and test time series models and perform forecasts.
- Apply the estimated models using the R programming language.

### General Competencies

- Data and information search, analysis, and synthesis using the necessary technologies.
- Adaptation to new situations.
- Decision-making.
- Autonomous work.
- Teamwork.
- Work in an international environment.
- Work in an interdisciplinary environment.
- Project design and management.
- Generation of new research ideas.

## 3. MODULE CONTENT

- Simple and multiple linear regression (OLS): Assumptions, sample estimation, hypothesis testing, significance tests for variables and linear constraints, simple and adjusted coefficient of determination, properties of estimators.
- Violations of assumptions: Autocorrelation, heteroscedasticity, statistical tests (White, Durbin-Watson, Breusch-Godfrey), GLS and FGLS estimators, correlation of explanatory variables and error term, multicollinearity, misspecification.
- Models of limited dependent variables.
- Vector Autoregressive (VAR) models and causality tests.

- Non-stationarity and unit root tests.
- Cointegration and error correction models. Identification in standard and cointegrated systems.
- Time-varying coefficient models.
- Traditional panel data models.
- Dynamic heterogeneous panels.
- Non-stationary panels.

#### 4. TEACHING AND LEARNING METHODS EVALUATION

<b>TEACHING METHOD</b>	Hybrid																		
<b>USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES</b>	<p>Support for the learning process is provided through the use of:</p> <p>(a) The e-class electronic platform, institutional email, and the online course on the MS-TEAMS platform.</p> <p>(b) The R programming language.</p>																		
<b>ORGANISATION OF TEACHING</b>	<p>The course is delivered within the classrooms of the Department of Economic Sciences, utilizing Microsoft Office 365 tools (Word, Excel, PowerPoint) and the R programming language. Lecture slides and supporting materials for each session are already posted on the e-class electronic platform for students to access during the lecture. The existing technological equipment in the classrooms also allows the use of an electronic whiteboard via a WACOM device, which enables writing on presentations and texts with the ability to save enriched texts and presentations. Enriched texts containing comments on the lectures, as well as solutions to exercises and problems, are also uploaded to the e-class of the course after each lecture. Files containing additional exercises and problems for practice and understanding of the course material are provided for each topic. Solutions and comments for these problems are given either during the lectures or during specified office hours announced by the instructor (in special cases, even through email using students' institutional accounts).</p> <p>More specifically, the workload of the module is analyzed as follows:</p> <table border="1" data-bbox="563 1485 1278 2004"> <thead> <tr> <th>Type</th> <th>Description</th> <th>WORKLOAD (HOURS)</th> </tr> </thead> <tbody> <tr> <td></td> <td>Lectures</td> <td>39</td> </tr> <tr> <td></td> <td>Study at home</td> <td>80</td> </tr> <tr> <td></td> <td>Completion of assignments</td> <td>50</td> </tr> <tr> <td></td> <td>Preparation for the final exam</td> <td>39</td> </tr> <tr> <td></td> <td>Final Examination</td> <td>2</td> </tr> </tbody> </table>	Type	Description	WORKLOAD (HOURS)		Lectures	39		Study at home	80		Completion of assignments	50		Preparation for the final exam	39		Final Examination	2
Type	Description	WORKLOAD (HOURS)																	
	Lectures	39																	
	Study at home	80																	
	Completion of assignments	50																	
	Preparation for the final exam	39																	
	Final Examination	2																	

	Total	210
<b>MODULE ASSESSMENT</b>	<p>EXAMINATION PERIOD A' SEMESTER</p> <p>Individual/Group Assignment: 30%</p> <p>Written Exam: 70%</p> <p>REPEAT EXAMINATION</p> <p>Written Exam: 100%</p>	
<b>5. RECOMMENDED BIBLIOGRAGHY</b>		
<i>Suggested Bibliography:</i>	<ul style="list-style-type: none"> <li>- Greene, W. H. (2003). Econometric analysis. Pearson Education India.</li> <li>- Wooldridge, J. M. (2015). Introductory econometrics: A modern approach. Cengage learning.</li> <li>- Gujarati, D. N. (2022). Basic econometrics. Prentice Hall.</li> <li>- Stock, J. H., &amp; Watson, M. W. (2015). Introduction to econometrics 3rd ed.</li> <li>- Baltagi, B. H., (2008). Econometric analysis of panel data (Vol. 4). Chichester: Wiley.</li> <li>- Wooldridge, J. M. (2010). Econometric analysis of cross section and panel data. MIT press.</li> </ul>	