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<b>Course title</b>	<b>Introduction to Quantitative Methods</b>			
<b>Course code</b>	<b>MATH107</b>			
<b>Course type</b>	<b>Theoretical, Elective Course</b>			
<b>Level</b>	Undergraduate			
<b>Year / Semester</b>	Year 1 Semester 1			
<b>Teacher's name</b>	Dr. Kyriakou Sophia			
<b>ECTS</b>	6	<b>Lectures / week</b>	3	<b>Laboratories / week</b>
<b>Course purpose and objectives</b>	The course provides an introductory module on quantitative methods, with the necessary emphasis on financial mathematics both through theory and on examples related to the field of Business Administration. Furthermore, the techniques and methods of analysis and presentation of data from tables and other sources are presented.			
<b>Learning outcomes</b>	<p>After the completion of the course students are expected to:</p> <ul style="list-style-type: none"> <li>• Apply calculations and use algebraic methods</li> <li>• Construct and Use: Graphs Charts and diagrams with the use of business data</li> <li>• Plot and Interpret Graphs and Charts with the use of business data</li> </ul>			
<b>Prerequisites</b>	None	<b>Required</b>	None	
<b>Course content</b>	<ul style="list-style-type: none"> <li>• <b>Formulae:</b> Formulating a problem, Constants and Variables, Rearranging Formulae</li> <li>• <b>Basic Business Applications:</b> Currency and Rates Exchange, Discounts and commission, Simple and Compound Interest, Depreciation,</li> <li>• <b>Basic Principles of Graphs:</b> Drawing a Graph, Graphing the functions of a Variable, Graphs of Equations, Using Graphs in Business Problems</li> <li>• <b>Optimization Theory:</b> Optimization of Functions of One Variable, Optimization of Functions of Several Variables, Constrained Optimization of Functions of Several Variables</li> <li>• <b>Linear Programming:</b> The Simplex Method, Problem Formulation and Assumptions, Graphical Solution of Linear Programming Problems, Maximization and Minimization Problems, Sensitivity Analysis, Duality, Integer Programming</li> <li>• <b>Charts drawing and diagrams derived from tabular data:</b> Graphs plotting and interpretation for simple linear, and other equations and functions, Identification of points of importance on graphs</li> </ul>			

	<ul style="list-style-type: none"> <li>• <b>Calculations made on scientific calculator and spreadsheet</b></li> </ul>
<b>Teaching methodology</b>	<p>The course content will be taught using:</p> <ul style="list-style-type: none"> <li>• Power Point presentations</li> <li>• Guided discussions with the active participation of students</li> <li>• Examples and case studies that relate to the content of the course</li> <li>• Question and answer section</li> <li>• Use of internet and related IT infrastructure</li> <li>• Use of video projector and whiteboard</li> <li>• Use of calculator</li> </ul>
<b>Bibliography</b>	<p><b>Greek Bibliography</b></p> <ul style="list-style-type: none"> <li>• Μονοβασίλης, Θ., Καλογηράτου, Ζ., 2015. Οικονομικά μαθηματικά. [ηλεκτρ. βιβλ.] Αθήνα:Σύνδεσμος Ελληνικών Ακαδημαϊκών Βιβλιοθηκών. ISBN: 978-960-603-128-1 <b>Διαθέσιμο στο:</b> <a href="http://hdl.handle.net/11419/1221">http://hdl.handle.net/11419/1221</a></li> <li>• Φλώρου, Γ., 2015. Ποσοτικές μέθοδοι στα χρηματοοικονομικά. [ηλεκτρ. βιβλ.] Αθήνα:Σύνδεσμος Ελληνικών Ακαδημαϊκών Βιβλιοθηκών. ISBN: 978-960-603-163-2. <b>Διαθέσιμο στο:</b> <a href="http://hdl.handle.net/11419/5066">http://hdl.handle.net/11419/5066</a></li> </ul> <p><b>English Bibliography</b></p> <ul style="list-style-type: none"> <li>• ADIL H. MOUHAMMED. Quantitative Methods for Business and Economics. London: Routledge, 2015. ISBN 9780765604583 <b>EBSCOhost</b></li> <li>• Waters, Donalds(2008), Quantitative methods for business,4<sup>th</sup>,Prentice Hill,ISBN:9780273694588.</li> <li>• Curwin, J.,Slater R.(2013), Quantitative methods for business decisions,7th,Thomson,ISBN: 978-1408060193</li> </ul>
<b>Assessment</b>	<ul style="list-style-type: none"> <li>• Attendance and Class Participation: 10%</li> <li>• Intermediary Written Examination: 40%</li> <li>• Final Written Examination: 50%</li> </ul>
<b>Language</b>	Greek or English