

Course unit title:	Measurement Project		
Course unit code:	QSP220		
Type of course unit:	Compulsory		
Level of course unit:	Bachelor (1st Cycle)		
Year of study:	2		
Semester when the unit is delivered:	4		
Number of ECTS credits allocated :	5		
Name of lecturer(s):	Mr. George Papadopoulos		
Learning outcomes of the course unit:	<ol style="list-style-type: none"> 1. Identify methods of measurement and understand the general principles of measurement. 2. Apply measurement procedures and mensuration applications. 3. Apply measurement methods to generate bills of quantities to complement contract documents. 4. Evaluating the advantages and disadvantages of different measurement methods. 5. Create measurements for Groundwork and Foundations, Brick and Block Walling, Stone Walling, Floors and Partitions, Pitched and Flat Roofs, Internal Finishes, Windows, Doors, Staircases and Fittings and the preparation and production of Bills of Quantities. 		
Mode of delivery:	Face-to-face		
Prerequisites:	None	Co-requisites:	None
Recommended optional program components:			
Course contents:	<p><u>Introduction to Measurement:</u></p> <p>Basics of Quantity Surveying and Measurement of Works. Definition of Quantity Surveying. Building team members and their roles.</p> <p><u>Methods of Measurement and Bills of Quantities Preparation:</u></p> <p>Definition of the Bills of Quantities. Presentation of the main types of Bills of Quantities (trade bills and elemental bills) and their advantages and disadvantages. Methods of Measurement or Taking Off. Two main methods presented: the trade method and the group methods; Their differences and advantages and disadvantages discussed. Methods of preparing Bills of Quantities. Three main methods discussed: traditional method, cut and shuffle method and computer. General principles for inserting dimensions and writing descriptions.</p> <p><u>Measurement of Substructure:</u></p> <p>Examples of measurement of earthworks. Measure amount of earth to be excavated and removed from a sloping site. Measure material excavation and filling for embankments. Examples of trench excavations. Measure excavation, removal of earth material, filling material, concrete, concrete formwork and any brick work related to foundations.</p> <p><u>Measurement of Superstructure:</u></p> <p>Measure external brick and block walls including fires and vents. Measure internal walls and internal finishes. Measure internal floors. Measure pitched and flat roofs (in timber or concrete) and covering materials. Measure external windows and doors and internal doors. Measure internal staircase and fittings.</p> <p><u>Preparation of Bills of Quantities:</u></p> <p>Examples of preparing the final bills of quantities for a simple building and other projects.</p>		
Recommended and/or required reading:			
Textbooks:	S. Lee, W. Trench & A. Willis, Willis's Elements of Quantity Surveying, 10 th ed., Wiley Blackwell, 2005.		

References:	<ul style="list-style-type: none"> • I.H. Seeley, Building quantities explained, 5th ed., Palgrave Macmillan, 1998. • P. Griffiths, S. Birchall & J.W. Ramus, Contract Practice for Surveyors, 4th ed., Butterworth-Heinemann, 2006. • M. Brook, Estimating and Tendering for Construction Work, 4th ed., Butterworth-Heinemann, 2008.
Planned learning activities and teaching methods:	The course will be delivered through a real practical project carried out by the students. Lecture notes, feedback and additional material such as site videos and photographs will be available to students at any time on the e-learning platform. The instructor will be available to students during office hours or by appointment in order to provide any additional tutoring.
Assessment methods and criteria:	<ul style="list-style-type: none"> • Course Project: 100%
Language of instruction:	English
Work placement(s):	No