

Subject Description Form

Subject Code	BRE345
Subject Title	Measurement, Documentation & Estimating
Credit Value	3
Level	3
Pre-requisite / Co-requisite/ Exclusion	BRE291
Objectives	The objectives of this subject are to equip students with the skills and knowledge to measure buildings and property accurately and efficiently and produce appropriate documentation to obtain a competitive price.
Intended Learning Outcomes	<p>Upon completion of the subject, students will be able to:</p> <ol style="list-style-type: none"> 1. Prepare, examine and compare documentation to be used in procurement of building works and property. 2. Quantify and describe new building works and alteration work. 3. Analyse and synthesis composition of unit rates and an appreciation of the cost.
Subject Synopsis/ Indicative Syllabus	<p><u>Measurement of new building work, alteration work and property (for learning outcome 1) :</u></p> <p>Organisation and systems of measurement including subdivision of building elements, gross measurement, schedules and other preparatory documentation such as query lists.</p> <p>Mensuration commonly used in measurement including mean girth, formulae for regular figures and methods of measuring irregular figures, interpolation and extrapolation of ground levels, gross and net floor areas.</p> <p>Measurement techniques : measurement of buildings, comparative studies of measurement procedures and examination of forward trends.</p> <p><u>Documentation of new building work, alteration work and property (for learning outcome 2) :</u></p> <p>Communication between buyer, designer, construction and estimator; types of documentation and their uses; preparation and uses of bills of quantities and specifications; preambles and preliminaries.</p> <p><u>Estimating (for learning outcome 3):</u></p> <p>Factors influencing the pricing of new works and property.</p> <p>Evaluation of resources: labour, plant and materials. Enquiries for materials and sub-contract prices; calculation of unit rates; calculation of preliminaries and temporary works.</p> <p>Estimator's cost report to management.</p>

Teaching/Learning Methodology	The theory and rationale will be delivered in lecture periods. Practical experiences will be relocation in the tutorial periods.							
Assessment Methods in Alignment with Intended Learning Outcomes	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)					
			a	b	c	d	e	
	1. Coursework I: Individual assignment (taking off exercise, preparing taking off documents)	20%	√	√				
	2. Coursework II: Group project (estimating problem)	20%	√	√	√			
	3. Examination	60%						
Total	100 %							
<p>Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</p> <p>Students are given an individual assignment (taking off exercise) from reading construction drawings to taking dimensions off from the drawings. Upon completion of the assignment 1, students will be able to achieve learning outcome 1 &2.</p> <p>Students are given a group project to solve some estimating problems. Through the problem solving exercises relating to estimating activities, students will be able to achieve learning outcome 3.</p>								
Student Study Effort Expected	Class contact:							
	▪ Lecture							21 Hrs.
	▪ Seminar / Tutorial							21 Hrs.
	Other student study effort:							
	▪ student study effort							120 Hrs.
	Total student study effort							120 Hrs.
Reading List and References	<p>Aqua Group (1990) <i>Tenders and Contracts for Building</i>, BSP Professional Books, Oxford</p> <p>Aqua Group (1992) <i>Precontract Practice for the Building Team</i>, BSP Professional Books, Oxford</p> <p>Holroyd T.M. (2000) <i>Principles of Estimating</i>, Thomas Telford, London</p> <p>Picken D.H. & Drew D.S. (1996) <i>Building Measurement in Hong Kong: Worked Examples</i> Longman Asia Ltd., Hong Kong</p> <p>Royal Institution of Chartered Surveyors (1979) <i>Hong Kong Standard Method of Measurement for Building Works</i> 3rd Edition, Royal Institution of Chartered Surveyors (Hong Kong Branch)</p> <p>Turner D. (1983) <i>Quantity Surveying Practice and Administration</i>, Godwin, London</p>							