

City University of Hong Kong
Course Syllabus

offered by Division of Building Science and Technology
with effect from Semester A 2018/19

Part I Course Overview

Course Title:	Building Measurement 1
Course Code:	BST12752
Course Duration:	1 semester
Credit Units:	3 credits
Level:	A1
Proposed Area: <i>(for GE courses only)</i>	<input type="checkbox"/> Arts and Humanities <input type="checkbox"/> Study of Societies, Social and Business Organisations <input type="checkbox"/> Science and Technology
Medium of Instruction:	English
Medium of Assessment:	English
Prerequisites: <i>(Course Code and Title)</i>	Nil
Precursors: <i>(Course Code and Title)</i>	Nil
Equivalent Courses: <i>(Course Code and Title)</i>	Nil
Exclusive Courses: <i>(Course Code and Title)</i>	Nil

Part II Course Details

1. Abstract

(A 150-word description about the course)

This course aims to equip students with basic practical skills in the measurement of common building works in accordance with the Hong Kong Standard Methods of Measurement and preparation of various tender documents for procurement purposes.

2. Course Intended Learning Outcomes (CILOs)

(CILOs state what the student is expected to be able to do at the end of the course according to a given standard of performance.)

No.	CILOs [#]	Weighting* (if applicable)	Discovery-enriched curriculum related learning outcomes (please tick where appropriate)		
			A1	A2	A3
1.	Measure quantities of common work sections of buildings according to the Hong Kong Standard Methods of Measurement of Building Works (HKSMW).	80%			✓
2.	Apply various billing methods to produce bills of quantities.	10%			✓
3.	Explain various tender documents of building works.	10%			✓
		100%			

* If weighting is assigned to CILOs, they should add up to 100%.

[#] Please specify the alignment of CILOs to the Gateway Education Programme Intended Learning outcomes (PILOs) in Section A of Annex.

A1: Attitude

Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.

A2: Ability

Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to self-life problems.

A3: Accomplishments

Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artefacts, effective solutions to real-life problems or new processes.

3. Teaching and Learning Activities (TLAs)
(TLAs designed to facilitate students' achievement of the CILOs.)

TLA	Brief Description	CILO No.			Hours/week (if applicable)
		1	2	3	
Lecture Average class size: Around 100 students	For each building work section, lecture is used to explain the relevant principles and skills of measurement through worked examples. Students are also required to practice measurement themselves during and after lecture sessions.	✓			2 Hours/week
Lecture Average class size: Around 100 students	The principles of billing methods and documentation are taught through lectures. Real-life tender documents are used to illustrate the relevant professional practices.		✓	✓	1 Hour/week

4. Assessment Tasks/Activities (ATs)
(ATs are designed to assess how well the students achieve the CILOs.)

Assessment Tasks/Activities	CILO No.			Weighting*	Remarks
	1	2	3		
Continuous Assessment: 40%					
A series of formative assignments designed to help students practise their measurement skills	✓			-	
Three summative assignments for assessing students' measurement skills and application of various billing methods	✓	✓		40%	
Examination: 60% (duration: 2.5 hours, if applicable)					
* The weightings should add up to 100%.				100%	

Note: A student must obtain a minimum mark of 35 in both coursework and examination components and an overall mark of 40 to pass the course.

5. Assessment Rubrics

(Grading of student achievements is based on student performance in assessment tasks/activities with the following rubrics.)

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B, B-)	Fair (C+, C, C-)	Marginal (D)	Failure (F)
1. Measurement task	Ability to accurately measure the dimensions of, and also precisely describe, individual building works from given drawings and specifications in accordance with HKSMM.	Nearly all work items with accurate measurement and description	Most work items with accurate measurement and description	Many work items with some errors in measurement or description	Many work items with many errors in measurement or description	Limited work items only
2. Documentation task	Ability to use the appropriate theories and practices for specific tender and documentation situations/issues	All relevant points from theories and practices for thoroughly and convincingly addressing the issues.	Most relevant points from theories and practices for adequately addressing the issue.	Many relevant points from theories and practices for addressing the issue.	Many relevant points from theories and practices, without addressing the issue.	Some relevant points from theories and practices only

Part III Other Information (more details can be provided separately in the teaching plan)

1. Keyword Syllabus

(An indication of the key topics of the course.)

Measurement of simple building works:

- Strip foundation
- Column base foundation
- Reinforced concrete superstructure and staircase
- Brick and block walls
- Roof covering
- Internal finishing
- Metal window
- Timber door (including ironmongery)
- Hot and cold water supply system
- Soil, waste and ventilation pipe system
- Drainage installation

Documentation:

- Methods of processing measured quantities including abstracting and billing, cut and shuffle, direct billing and scheduling;
- Use of devices such as provisional quantities, prime cost rates, provisional sums and prime cost sums including profits and attendance;
- Application of preliminaries and preambles clauses.

2. Reading List

2.1 Compulsory Readings

(Compulsory readings can include books, book chapters, or journal/magazine articles. There are also collections of e-books, e-journals available from the CityU Library.)

1. The Hong Kong Institute of Surveyors (2006). *Hong Kong Standard Method of Measurement of Building Works*, Hong Kong: Hong Kong Institute of Surveyors.
2. Architectural Services Department, HKSAR Government (2015). *Model Bills of Quantities for Building Works*, Hong Kong: Government Printer.
(An electronic copy can be downloaded free of charge from the Architectural Services Department's website at <https://www.archsd.gov.hk/en/publications-publicity/publications.aspx>)

2.2 Additional Readings

(Additional references for students to learn to expand their knowledge about the subject.)

1. Chan, C.T.W. (2015), *Estimating and Measurement for Simple Building Works in Hong Kong*, Pearson Education Asia Limited, Hong Kong.
2. Ramus, J., Birchall, S. and Griffiths, P. (2006). *Contract practice for surveyors*, Spon Press, Abington.
3. Lee, S., Trench, W. and Willis, A. (2014). *Wills's Elements of Quantity Surveying*, Wiley Blackwell, United Kingdom.
4. Packer, A. (2017), *Building Measurement*, Routledge, Oxon, United Kingdom.