City University of Hong Kong
Course Syllabus

offered by Department of Architecture and Civil Engineering
with effect from Semester A 2022/23

Part I Course Overview

Course Title:	Cost Engineering
Course Code:	CA5245
Course Duration:	1 Semester (Some courses offered in Summer Term may start a few weeks earlier than the normal University schedule. Please check the teaching schedules with CLs before registering for the courses.)
Credit Units:	3
Level:	P5
Medium of Instruction:	English
Medium of Assessment:	English
Prerequisites: *(Course Code and Title)*	Nil
Precursors: *(Course Code and Title)*	Nil
Equivalent Courses: *(Course Code and Title)*	Nil
Exclusive Courses: *(Course Code and Title)*	Nil

Part II Course Details

1. Abstract

To give the students a basic understanding of cost engineering for construction: estimation and assessment of cost in construction projects; cost as a key factor in the choice of construction approaches and design solutions; costing and tendering; project cost control; time and responsibility.

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.	Recognize the basic principles of cost engineering for construction;				
2.	Manage estimation and assessment of cost in construction projects;				
3.	Identify the relationship of cost and design solutions and construction approaches;				
4.	Recognize the importance of time, and responsibility.			✓	
		100%			

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	4	
Lectures and class tests	Understand, evaluate and apply knowledge of Green building, building energy, energy conservation, renewable energy, LEED, indoor environmental quality, building durability, climate, culture	✓	✓	✓	✓	27 hrs/course
Presentation	Assignment Presentations				✓	12 hrs/course

Semester Hours:	3 hours per week
Lecture/Tutorial/Laboratory Mix:	Lecture (1); Tutorial (2); Laboratory (0)

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

Assessment Tasks / Activities	CILO No.				Weighting	Remarks
	1	2	3	4		
Continuous Assessment: 100%						
Assignments	✓	✓	✓	✓	50%	
Class tests	✓	✓			30%	
Presentations				✓	20%	
Examination: 0%						
					100%	

5. Assessment Rubrics

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

Applicable to students admitted in Semester A 2022/23 and thereafter

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B)	Marginal (B-, C+, C)	Failure (F)
Assignments	Ability to appreciate CILO 1 to 4	High	Significant	Basic	Not even reaching marginal levels
Class tests	Ability to appreciate CILO 1 to 2	High	Significant	Basic	Not even reaching marginal levels
Presentations	Ability to appreciate CILO 4	High	Significant	Basic	Not even reaching marginal levels

Applicable to students admitted before Semester A 2022/23

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B, B-)	Fair (C+, C, C-)	Marginal (D)	Failure (F)
Assignments	Ability to appreciate CILO 1 to 4	High	Significant	Moderate	Basic	Not even reaching marginal level
Class tests	Ability to appreciate CILO 1 to 2	High	Significant	Moderate	Basic	Not even reaching marginal level
Presentations	Ability to appreciate CILO 4	High	Significant	Moderate	Basic	Not even reaching marginal level

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.)

Cost engineering for construction: estimation and assessment of cost in construction projects; cost and construction approaches; cost and design solutions; costing and tendering; project cost control; time and responsibility.

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.	Nil

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

1.	Basic cost engineering / Kenneth K. Humphreys, Paul Wellman, New York : M. Dekker, c1996.
2.	Cost engineering for effective project control / Sol A. Ward, New York : J. Wiley, c1992.
3.	Applied cost engineering / Forrest D. Clark, A.B. Lorenzoni, New York : M. Dekker, c1985.
4.	Strategic cost analysis : for project managers and engineers / Robert C. Creese, M Adithan, Tunbridge Wells, Kent : New Academic Science, c2012.
5.	Cost analysis and estimating for engineering and management / Phillip F. Ostwald, Timothy S. McLaren, Upper Saddle River, NJ : Pearson Education, c2004.
6.	http://www.icoste.org/
7.	http://www.aacei.org/
8.	http://en.wikipedia.org/wiki/Cost_engineering