CA3314: SURVEYING STUDIO

Effective Term
Semester A 2024/25

Part I Course Overview

Course Title
Surveying Studio

Subject Code
CA - Civil and Architectural Engineering
Course Number
3314

Academic Unit
Architecture and Civil Engineering (CA)

College/School
College of Engineering (EG)

Course Duration
One Semester

Credit Units
3

Level
B1, B2, B3, B4 - Bachelor's Degree

Medium of Instruction
English

Medium of Assessment
English

Prerequisites
Nil

Precursors
Nil

Equivalent Courses
BC3314/BC3314F Surveying Studio I

Exclusive Courses
Nil

Part II Course Details

Abstract

The course aims to provide students with knowledge about preparing tender documents and adopting digital technologies in BQ production.

Course Intended Learning Outcomes (CILOs)

	CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	apply measurement rules for taking off quantities of real-life projects				x
2	describe the production process of Bills of Quantities (BQ)			x	
3	discuss the types of project information used for tender documents		x		
4	demonstrate communication skills with other construction professionals to seek solutions		x		
5	identify digital technologies for BQ production			x	

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 real-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.

Learning and Teaching Activities (LTAs)

	LTAs	Brief Description	CILO No.	Hours/week (if applicable)
1	Lectures	Students will engage in formal lectures to gain knowledge for achieving the CILOs	1, 2, 3, 4, 5	
2	Tutorials	Students will engage in tutorial activities to extend their learning by involving in class discussions and exercises	1, 2, 3, 4, 5	
3	Projects	Students will participate in assignment projects to produce tender documents by using digital technologies	1, 2, 3, 4, 5	

Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1	Assignment	1, 2, 3, 4, 5	60	
2	Mid-term test	1, 2, 3, 4, 5	20	
3	End-term test	1, 2, 3, 4, 5	20	

Continuous Assessment (%)

100

Examination (%)

0

Assessment Rubrics (AR)

Assessment Task

Assignment

Criterion

1. Capacity to produce BQ by using digital technologies
2. Ability to prepare tender documents by managing the project information and formulating a logical production process based on students' own exploration from the project

Excellent (A+, A, A-)

Exceptional

Good (B+, B, B-)

High

Fair (C+, C, C-)

Moderate

Marginal (D)

Basic

Failure (F)

Not reaching marginal level

Assessment Task

Mid-term test

Criterion

1. Capacity to explore building design for acquiring project information
2. Ability to use measurement techniques for taking-off quantities

Excellent (A+, A, A-)

Exceptional

Good (B+, B, B-)

High

Fair (C+, C, C-)

Moderate

Marginal (D)
Basic

Failure (F)
Not reaching marginal level

Assessment Task
End-term test

Criterion
1. Capacity to present tender documents with a demonstration of the know-how of tender production
2. Ability to respond to technical queries in a professional manner

Excellent (A+, A, A-)
Exceptional

Good (B+, B, B-)
High

Fair (C+, C, C-)
Moderate

Marginal (D)
Basic

Failure (F)
Not reaching marginal level

Part III Other Information

Keyword Syllabus
BQ production; Tender documents; Interdisciplinary communication; Digital technologies; Three-dimensional building models

Reading List

Compulsory Readings

	Title
1	Keung, C.W.C., Yeung, K.L.D., Cheung, S.O. 2022, Quantity Surveying Practice: the nuts and bolts, Oxon, Routledge. [TH435.K48 2022]
2	Architectural Services Department, Government of HKSAR, Model Bills of Quantities, Government Printer, Hong Kong. [Call no. is unavailable but the book can be downloaded from: https://www.archsd.gov.hk/en/reports/technical-documents.html]
3	Hong Kong Institute of Surveyors 2018, Hong Kong Standard Method of Measurement of Building Works, 4th Edition Revised 2018, Hong Kong. [TH425.H853 2018]

Additional Readings

	Title
1	Picken, D.H. and Drew, D.S. 1996, Building Measurement in Hong Kong: Worked Examples, Hong Kong Polytechnic, Hong Kong. [TH435.P52 1991]

2	Seeley, I.H. 1999, Building Quantities Explained, MacMillan, Hampshire. [TH435.S43 1999]
3	Wills, C.J. 1998, Willis's Elements of Quantity Surveying, 9th edition, Blackwell Science, Oxford. [TH435.W54 1998]
4	Ashworth, A. 2007, Willis's Practice and Procedure for the Quantity Surveyor, 12th edition, Blackwell Science, Oxford. [TH435.W6853 2007]
5	Bowyer, J. 1985, Practical Specification Writing: for Architects and Surveyors, 2nd edition, Hutchison, London. [TH425.B68 1985]
6	Goodacre, P.E. 1982, Worked Examples in Quantity Surveying Measurement, E. & F. N. Spon, London. [TH437.G64 1982]
7	The Aqua Group 1986, Pre-contract Practice for Architects and Quantity Surveyors, 7th edition, Collins, London. [TH425.P73 1986]
8	Willis, C.J. 1994, Practice and Procedure for the Quantity Surveying, 10th edition, Blackwell Scientific Pub., Oxford. [TH425.W55 1994]