

CA3324: ADVANCED SURVEYING STUDIO

Effective Term

Semester A 2024/25

Part I Course Overview

Course Title

Advanced Surveying Studio

Subject Code

CA - Civil and Architectural Engineering

Course Number

3324

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

Nil

Exclusive Courses

Nil

Part II Course Details

Abstract

The course aims to strengthen students' professional practices, in particular on (i) contractual and financial aspects, (ii) knowledge of smart technologies in construction, and (iii) discovering their applications in building projects.

Course Intended Learning Outcomes (CILOs)

CILOs		Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	apply estimating techniques on real-life cost planning tasks		x	x	x
2	discuss the financial and contractual aspects of construction tenders			x	
3	demonstrate assessment skills for payment valuation and variations in accordance with the principles laid down in the Standard Conditions of Contract			x	
4	apply the Common Law principles and interpret Standard Conditions of Contract on assessment of contractual claims			x	
5	identify the viable contractual arrangement for execution of specialist works in the building projects		x	x	
6	formulate the assessment procedures of insurance policy and surety bond			x	
7	discuss smart technologies for the surveying profession		x	x	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, 6, 7	
2	Tutorials	Students will engage in tutorial activities to extend their learning by involving in class discussion and exercises	1, 2, 3, 4, 5, 6, 7	

3	Projects	Students will participate in assignment projects and propose advice and solutions to contractual and financial problems related to construction projects	1, 2, 3, 4, 5, 6, 7	
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Assessment Tasks / Activities (ATs)

ATs		CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1	Assignment	1, 2, 3, 4, 5, 6, 7	30	
2	Mid-term test	1, 2, 3, 4, 5, 6, 7	20	
3	End-term test	1, 2, 3, 4, 5, 6, 7	50	

Continuous Assessment (%)

100

Examination (%)

0

Assessment Rubrics (AR)**Assessment Task**

Assignment

Criterion

Request students to advise on scenario cases to test their ability to solve professional practice issues.

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

Test student's ability of understanding of the basic principles of professional surveyor practices.

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

Scenario-type questions enable students to illustrate their ability to analyse/discover and make recommendations on different professional issues.

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

Cost estimation; Tender examination; Valuation of interim payment and variations; Contractual claims; Final Account; Insurance and bond; Smart construction technologies.

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]

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	Hong Kong Institute of Surveyors 2018, Hong Kong Standard Method of Measurement of Building Works, 4th edition revised 2018, Hong Kong. [TH425.H853 2018]
4	Wills, C.J. 1998, Willis's Elements of Quantity Surveying, 9th edition, Blackwell Science, Oxford. [TH435.W54 1998]
5	Ashworth, A. 2007, Willis's Practice and Procedure for the Quantity Surveyor, 12th edition, Blackwell Science, Oxford. [TH435.W6853 2007]
6	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]
7	Bowyer, J. 1985, Practical Specification Writing: for Architects and Surveyors, 2nd edition, Hutchison, London. [TH425.B68 1985]
8	Goodacre, P.E. 1982, Worked Examples in Quantity Surveying Measurement, E. & F. N. Spon, London. [TH437.G64 1982]
9	The Aqua Group 1986, Pre-contract Practice for Architects and Quantity Surveyors, 7th edition, Collins, London. [TH425.P73 1986]
10	Willis, C.J. 1994, Practice and Procedure for the Quantity Surveying, 10th edition, Blackwell Scientific Pub., Oxford. [TH425.W55 1994]