

CA3314: SURVEYING STUDIO

Effective Term

Semester A 2022/23

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 the knowledge of producing a set of tender documents as well as their applications in a real-life project.

Course Intended Learning Outcomes (CILOs)

| | CILOs | Weighting (if app.) | DEC-A1 | DEC-A2 | DEC-A3 |
|---|--|---------------------|--------|--------|--------|
| 1 | apply measurement rules for taking-off quantities of a real-life project | | | | x |
| 2 | formulate the production process of Bills of Quantities (BQ) | | | x | |
| 3 | organize project information for compilation of tender documents | | x | | |
| 4 | communicate with other construction professionals for seeking solutions | | x | | |
| 5 | discover the advanced computer technology for BQ production and measurement of three-dimensional model | | | 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.

Teaching and Learning Activities (TLAs)

| | TLAs | Brief Description | CILO No. | Hours/week (if applicable) |
|---|----------|--|---------------|----------------------------|
| 1 | Lecture | Delivering the lecture topics to students for their achievement of the CILOs | 1, 2, 3, 4, 5 | |
| 2 | Tutorial | Class assignments and discussions for students' reflection of the lecture topics | 1, 2, 3, 4, 5 | |
| 3 | Project | Discovery-based project allows students to explore building design and technical documentation for construction tender | 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 | 20 | |
| 3 | End-term test | 1, 2, 3, 4 | 20 | |

Continuous Assessment (%)

100

Examination (%)

0

Assessment Rubrics (AR)**Assessment Task**

Assignment

Criterion

1. Capacity to produce BQ by using the innovative computer software
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 the tender documents with demonstration of the know-how of tender production
2. Ability to respond the 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; Multi-disciplinary communication; Advanced computer technology; Three-dimensional building model

Reading List**Compulsory Readings**

| Title | |
|-------|-----|
| 1 | Nil |

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 2005, Hong Kong Standard Method of Measurement of Building Works, 4th edition, Hong Kong. [TH425.H853 2005] |
| 4 | Wills, C.J. 1998, Willis's Elements of Quantity Surveying, 9th edition, Blackwell Science, Oxford. [TH435.W54 1998] |

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|----|--|
| 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 2007, Model Bills of Quantities, Government Printer, Hong Kong. [Call No. is unavailable] |
| 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] |