

**City University of Hong Kong
Course Syllabus**

**offered by Division of Building Science and Technology
with effect from Semester B 2021/22**

Part I Course Overview

Course Title: Technical Practices

Course Code: BST12591

1 Semester

Course Duration:

Credit Units: 3 Credits

Level: A1

Proposed Area:
(for GE courses only)

- Arts and Humanities
 Study of Societies, Social and Business Organisations
 Science and Technology
-

Medium of Instruction: English

Medium of Assessment: English

Prerequisites:

(Course Code and Title)

Nil

Precursors:

(Course Code and Title)

BST12781 Building Communication

Equivalent Courses:

(Course Code and Title)

Nil

Exclusive Courses:

(Course Code and Title)

Nil

Part II Course Details

1. Abstract

(A 150-word description about the course)

This course aims to:

- enable students with understanding and hands-on skills on building services systems installations in relation to industrial practices.
- enable students with understanding and analysis of use of engineering software/calculation for building services system design.
- develop students' interesting and understanding of professional ethics, professional development and roles of professional bodies in building services industry.

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.	analyse the relative importance of various parameters for the basic building service system design				✓
2.	interpret technology impact on equipment, materials and work methods to enable students in discovering technology development and modern practice in building service industry			✓	
3.	recognise the importance of role and ethics of engineering profession		✓		
* If weighting is assigned to CILOs, they should add up to 100%		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	4	
Industrial Training	4-day Building Information Modelling (BIM) with Mechanical, Electrical and Piping (MEP) systems training in a workshop environment at an industrial training centre.		✓			8 hrs/day, 4 days
Basic Building Service System design Workshop	Seminar is in the form of groups of student. It is used to introduce the design information, standards and use of engineering software or spread sheet for basic building service system design. Assignments are used to enable students' analysis on the relative importance of various parameters in building service system design.	✓				13 weeks, 3 hours/week (size of class: around 50 students)

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: <u>100%</u>					
Industrial Training Workshop – test/report/assignment		✓		30%	
Basic building services design workshop – assignment	✓		✓	70%	
Examination: <u>0%</u> (duration: --, if applicable)					
				100%	

* The weightings should add up to 100%.

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. Test	A Test is in the form of multiple-choice question and/or short questions.	High	Significant	Moderate	Basic	Not even reaching
2. Assignment	An assignment may take the form of calculation exercise or case/design problems	High	Significant	Moderate	Basic	Not even reaching
3. Report	A report may take the form of literature survey and/or system study report	High	Significant	Moderate	Basic	Not even reaching marginal levels

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.)

1. Engineering design practice: design methodology; design process; design software application; sources of information; standards and regulations; local practice; and feasible design solution in the building service system design for cooling, lighting and piped services respectively.
2. Engineering profession: Role of engineers, professional ethics, team building, design appreciation.
3. Building Modelling Information (BIM): models of BIM with Mechanical, Electrical, Piping (MEP) systems, construction drawings, and documentations from BIM MEP models.

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.)

Nil

2.2 Additional Readings

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

1.	The CIBSE Code for Lighting (latest edition)
2.	Wang, S. K. (latest edition). <i>Handbook of Air Conditioning and Refrigeration</i> . McGraw-Hill Publishing Co.
3.	WSD (latest edition). <i>Handbook on Plumbing Installation for Buildings</i> . Water Supplies Department, HKSAR Government.
4.	The Institute of Plumbing, (latest edition). <i>The Plumbing Engineering Design Services Guide</i> .
5	Autodesk Revit Support and learning, https://knowledge.autodesk.com/support/revit