

**City University of Hong Kong
Course Syllabus**

**offered by Division of Building Science and Technology
with effect from Semester A 2018/19**

Part I Course Overview

Course Title: Technology for Living Environment

Course Code: BST12315

Course Duration: 1 semester

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) Nil

Equivalent Courses:
(Course Code and Title) BST11315 Construction Technology 1

Exclusive Courses:
(Course Code and Title) Nil

Part II Course Details

1. Abstract

(A 150-word description about the course)

This course aims to provide an understanding of the relationship between users, building performances and the living environment, and the principles and knowledge of the design and construction of low-rise buildings.

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.	Apply the social research method to identify the user requirements and planning requirements for a living environment	20%	✓	✓	
2.	Apply the design and construction principles and processes of foundation systems for low-rise buildings.	20%	✓		
3.	Apply the design and construction principles and processes of short-span structural systems to fulfil the user requirements of a low-rise building	20%	✓		
4.	Apply the design and construction principles and processes of basic building components and finishes to fulfil the user requirements of low-rise buildings	30%	✓		
5.	Discover the latest applications of sustainable construction for local projects	10%	✓	✓	
		100%			

* If weighting is assigned to CILOs, they should add up to 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.)

Lecture/Tutorial/Studio/Laboratory mix:

Lecture: 18 hours

Seminar: 3 hours (total hours: 21)

TLA	Brief Description	CILO No.					Hours/week (if applicable)
		1	2	3	4	5	
Lecture (Average class size: Around 100 students)	Large-class activity involving oral and multimedia presentation by lecturers and discussions with students.	✓	✓	✓	✓	✓	2 hours/week for 9 weeks

Seminar (Average class size: Around 30 students)	Teaching and learning activity in groups involving presentation by lecturer and discussion with students on a selected topic through illustrating exercises, real-life examples and question generated by the students and answering by peers or by the lecturer.	✓	✓	✓	✓	✓	3 hours/week for 7 weeks
---	---	---	---	---	---	---	--------------------------

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	4	5		
Continuous Assessment: <u>50%</u>							
Test	✓	✓	✓	✓	✓	15%	
Presentation	✓	✓	✓	✓	✓	10%	
Group Report	✓	✓	✓	✓	✓	15%	
Individual Assignment	✓	✓	✓	✓	✓	10%	
Examination: <u>50%</u> (duration: 2.5 hours, if applicable)							
* The weightings should add up to 100%.						100%	

1. **Test:** This may consist of multiple choice questions and/or short questions.
2. **Presentation:** Students in small groups are required to present their findings and conclusions for the user satisfaction survey and site reconnaissance.
3. **Group Report:** Students are required to submit a report for their findings and conclusions for the user satisfaction survey and site reconnaissance after the presentation.
4. **Individual Assignment:** This is a purposeful collection of student learning activities that documents the student's effort, progress and achievement in the process of learning.
5. **Examination:** This may consist of multiple choice questions and essay questions.

Students' communication, teamwork, analytical skills and critical thinking are assessed through written reports, presentations, self-reflection, peer evaluation and reflective journals in association with assessments for CILOs 1 to 5.

Note: A student must obtain a minimum mark of 35 in both coursework and examination and an overall mark of 40 to pass the course.

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	Ability to apply the principles and knowledge into the construction of low-rise buildings	High	Significant	Moderate	Basic	Not even reaching marginal levels
2. Presentation	Ability to present their findings and conclusions for the user satisfaction survey and site reconnaissance	High	Significant	Moderate	Basic	Not even reaching marginal levels
3. Group Report	Ability to draft a report for the findings and conclusions for the user satisfaction survey and site reconnaissance after the presentation	High	Significant	Moderate	Basic	Not even reaching marginal levels
4. Individual Assignment	Ability to document student's effort, progress and achievement in the process of learning.	High	Significant	Moderate	Basic	Not even reaching marginal levels
5. Examination	Ability to apply the principles and knowledge into the construction of low-rise buildings	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.)

Social research method

User requirements for a built environment

Introduction to planning and building control systems.

Building envelope

Sustainability

Site investigation.

Shallow and spread foundations

Form of structure for low-rise building. In-situ reinforced concrete floor

Functional requirements of walls. Brick, block and concrete walls.

Functional requirements of roofs. Structure and roof coverings. Roof lights

Construction of reinforced concrete stairs and steel stairs. Statutory legislations and requirements

Functional requirements of doors. Internal and external door sets. Fire and smoke resistance doors

Functional requirements of windows. Window sets

Functional requirements of finishes. Common wet trades: floor, wall and ceiling finishes

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.	Appleby P (2011), Integrated sustainable design of buildings, Earthscan
2.	Chudley, R. (1999) Construction Technology, 3rd Edition, Harlow, Essex: Longman
3.	Ahamed, A., Sturges, J. (2015) Materials science in construction: an introduction, Abingdon Oxon
4.	Foster, J. S. & Harington, R. (2007) Structure and Fabric, Part 1, 7th Edition, London: Longman
5.	Foster, J. S. & Harington, R. (2012) Structure and Fabric, Part 2 7th Edition, London: Longman
6.	Hastak, Patel, Marakand, Saumyang (2017) Construction technology, The Encyclopaedia of Housing
7.	Wong, W. S. (2006) Building Materials and Technology in Hong Kong, 3rd Edition, Hong Kong: All Arts Limited
8.	BST e-learning Center: http://www6.cityu.edu.hk/bst/elearning/index.aspx

2.2 Additional Readings

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

1.	Chan, E. H. W., Mok, P. K. W. & Scott. D. (2001) Statutory Requirement for Construction Professionals, Hong Kong:
2.	Chudley, R., Greeno, R., Hurst, M. Advanced construction technology, (2012) Essex: Pearson
3.	Dean, Y. (1996) Finishes, 4th Edition, Essex, UK: Longman
4.	Buildings Department, HKSAR: http://www.bd.gov.hk/english/index_e.html
5.	Joint University Virtue Building and Construction Environment homepage: http://www.cityu.edu.hk/CIVCAL/home.html