COURSE INFORMATION

School/Faculty:	PPD / SPACE	**Page:**	1 of 7	
Programme name:	Diploma in Property Management			
Course code:	DDWF 1513	**Academic Session/Semester:**		**2020/21/1**
Course name:	Building Technology	**Pre/co requisite (course name and code, if applicable):**		NA
Credit hours:	3			

Course synopsis	This course introduces students to some major views, the process, the elements and the theories of building environment development in Malaysia, under the Uniform Building Act 1984. It will emphasize on the general concepts of introduction to the building development process, building structure, bond working, building services, concrete working, wood working, building finishing, drawing and reading the floor plan and calculate the building area based on floor plan.			
Course coordinator (if applicable)	Nik Hamidi Bin Nik Mustapha			
Course lecturer(s)	**Name**	**Office**	**Contact no.**	**E-mail**
	Nik Hamidi Bin Nik Mustapha	F 306 R	016-6687481	nhamidi.kl@utm.my

Mapping of the Course Learning Outcomes (CLO) to the Programme Learning Outcomes (PLO), Teaching & Learning (T&L) methods and Assessment methods:

No.	CLO	PLO CODE	*Taxonomies and **generic skills	T&L methods	***Assessment methods
CLO1	**Apply** the theory and concept of building development environment in Malaysia step by step.	PLO1 (KW)	C3	Lecture	T, F
CLO2	**Measure** building plan and calculate the building area based on floor plan.	PLO3 (PS)	P4	Lecture, active learning	Asg
CLO3	**Make use of** variety of media to express ideas clearly and effectively as well as demonstrate understanding.	PLO6 (DS)	CS5	Seminar	Pr
CLO4	**Identify** the process, the elements and the theories of building development in Malaysia, under the Uniform Building Act 1984 in Real Estate profession.	PLO2 (CG)	C3	PR	PR
Refer *Taxonomies of Learning and **UTM's Graduate Attributes, where applicable for measurement of outcomes achievement ***T – Test; Q – Quiz; HW – Homework; Asg – Assignment; PR – Project; Pr – Presentation; F – Final Exam etc.					

Prepared by:	Certified by:
Name: Nik Hamidi Bin Nik Mustapha	Name: Mohamad Shafie Bin Abdul Rashid
Signature:	Signature:
Date: 22 April 2019	Date: 22 April 2019

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Week 1	**1.0 INTRODUCTION TO BUILDING DEVELOPMENT ENVIRONMENTS** • Introduction for building development environment. • Classification of buildings; residential, educational, institutional, hospitals, commercial and industrial. • Building's elements • The various rules, regulations and by-laws associated with the construction - Building development process - organization for building development
Week 2	**INTRODUCTION TO BUILDING DEVELOPMENT ENVIRONMENTS** • Introduction for building development environment. • Classification of buildings; residential, educational, institutional, hospitals, commercial and industrial. • Building's elements • The various rules, regulations and by-laws associated with the construction - Building development process - organization for building development
Week 3	**2.0 SUBSTRUCTURE** • Introduction for substructure. • Earthworks; Methods of cutting, filling, bulk excavation and compaction. • Site and soil investigations; Importance, procedures, types, selection and methods of site and soil investigation. • Piling works; Definition, types, classification of piles, pile driving, pile caps etc. • Concrete work; definition, types of concrete, • Concrete work's process and concrete's testing • Steel frame construction • Types, selection, fabrication and installation: frames, floors, staircases and roofs. • Ground Floor - Types, concept and elements.
Week 4	**SUBSTRUCTURE** • Introduction for substructure. • Earthworks; Methods of cutting, filling, bulk excavation and compaction. • Site and soil investigations; Importance, procedures, types, selection and methods of site and soil investigation. • Piling works; Definition, types, classification of piles, pile driving, pile caps etc. • Concrete work; definition, types of concrete, • Concrete work's process and concrete's testing • Steel frame construction • Types, selection, fabrication and installation: frames, floors, staircases and roofs. • Ground Floor - Types, concept and elements.

Week 5	**SUBSTRUCTURE** • Introduction for substructure. • Earthworks; Methods of cutting, filling, bulk excavation and compaction. • Site and soil investigations; Importance, procedures, types, selection and methods of site and soil investigation. • Piling works; Definition, types, classification of piles, pile driving, pile caps etc. • Concrete work; definition, types of concrete, • Concrete work's process and concrete's testing • Steel frame construction • Types, selection, fabrication and installation: frames, floors, staircases and roofs. • Ground Floor - Types, concept and elements. **Assignment to be submitted in week 10**
Week 6	**SUBSTRUCTURE** • Introduction for substructure. • Earthworks; Methods of cutting, filling, bulk excavation and compaction. • Site and soil investigations; Importance, procedures, types, selection and methods of site and soil investigation. • Piling works; Definition, types, classification of piles, pile driving, pile caps etc. • Concrete work; definition, types of concrete, • Concrete work's process and concrete's testing • Steel frame construction • Types, selection, fabrication and installation: frames, floors, staircases and roofs. • Ground Floor - Types, concept and elements. **Project to be submitted in week 14**
Week 7	**3.0 SCAFFOLDS AND FORMWORKS** • Scaffolds • Types of scaffolds - Light duty scaffolds - Heavy duty scaffolds - General purpose scaffolds • Formworks • Functions of formworks • Characteristics of good formworks • Design criteria of formworks • Construction process of formworks • Materials for formworks • Basic considerations in making formworks. • Other considerations – steps taken to avoid delay and to ensure good formwork

	construction and process. • Introduction for substructure.
Week 8	**MID-SEMESTER BREAK**
Week 9	**4.0 SUPER STRUCTURE** • Frame; Column, Upper floor beam and roof beam. • Upper Floor - Types, selection and methods of reinforced concrete upper floor construction. • Wall • Types, selection, components and building code requirements. • Cladding design considerations and performance factors. • Curtain wall cladding. • Roof - Definition, types and elements. • Staircase - Definition, types and elements. • Window - Definition, types and elements. • Door - Definition, types and elements. • Ceiling - Definition, types and elements. **Assignment 2 to be submitted in week 15**
Week 10	**SUPER STRUCTURE** • Frame; Column, Upper floor beam and roof beam. • Upper Floor - Types, selection and methods of reinforced concrete upper floor construction. • Wall • Types, selection, components and building code requirements. • Cladding design considerations and performance factors. • Curtain wall cladding. • Roof - Definition, types and elements. • Staircase - Definition, types and elements. • Window - Definition, types and elements. • Door - Definition, types and elements. • Ceiling - Definition, types and elements
Week 11	**SUPER STRUCTURE** • Frame; Column, Upper floor beam and roof beam. • Upper Floor - Types, selection and methods of reinforced concrete upper floor construction. • Wall • Types, selection, components and building code requirements. • Cladding design considerations and performance factors. • Curtain wall cladding. • Roof - Definition, types and elements.

	• Staircase - Definition, types and elements. • Window - Definition, types and elements. • Door - Definition, types and elements. • Ceiling - Definition, types and elements
Week 12	**SUPER STRUCTURE** • Frame; Column, Upper floor beam and roof beam. • Upper Floor - Types, selection and methods of reinforced concrete upper floor construction. • Wall • Types, selection, components and building code requirements. • Cladding design considerations and performance factors. • Curtain wall cladding. • Roof - Definition, types and elements. • Staircase - Definition, types and elements. • Window - Definition, types and elements. • Door - Definition, types and elements. • Ceiling - Definition, types and elements
Week 13	**5.0 BUILDING PLANS AND MEASUREMENT** • Introduction to the building plan • Type of plans • Calculation of the building area • Plan's reading and drawing skills
Week 14	**6.0 BUILDING FINISHES** • Wall finishes • Floor finishes • Ceiling finishes • Staircase finishes • Roof finishes
Week 15	**BUILDING FINISHES** • Wall finishes • Floor finishes • Ceiling finishes • Staircase finishes • Roof finishes **Project presentations**

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Transferable skills (generic skills learned in course of study which can be useful and utilised in other settings):

Communication skills

Student learning time (SLT) details:

Distribution of Student Learning Time (SLT) by CLO	**Teaching and Learning Activities**						**SLT**
	Guided Learning (Face to Face) L: Lecture, T: Tutorial, P: Practical, O: Others				**Guided Learning Non-Face to Face**	**Independent Learning Non-Face to face**	
CLO	**L**	**T**	**P**	**O**			
CLO1	34h				10h	20h	**64h**
CLO2	4h	7h		4h	8h	7h	**30h**
CLO3					4h	5h	**9h**
CLO4					2h	10h	**12h**
TOTAL	**38h**	**7h**		**4h**	**24h**	**42**	**115h**

No.	**Continuous Assessment**	**PLO (Code)**	**Percentage**	**SLT**
1	Test 1	PLO1 (KW)	10	**1h 15m**
2	Test 2	PLO1 (KW)	10	**1h 15m**
3	Assignment	PLO2 (CG)	5	As in CLO2 (30h)
4	Seminar	PLO3 (PS)	5	As in CLO3(9h)
5	Project	PLO6 (DS)	10	As in CLO4 (12h)
	Final Assessment			
6	Final Examination	PLO1 (KW)	60	**2h 30m**
Total SLT			**100**	**120h**

h: hours, m: minutes

Special requirement to deliver the course (e.g: software, nursery, computer lab, simulation room):

Lecture room, white board and LCD projector

Learning resources:

Text book (if applicable)

Main references

1. Varghese, P.C., 2017, "Building Construction", PHI Learning, Delhi
2. Bielefeld, B., 2015, "Basics Building Construction", Birkhäuser
3. Riley, M.& Cotgrave, A., 2014, "Construction Technology 2: Industrial and Commercial Building", Red Globe Press.
4. Riley, M.& Cotgrave, A., 2013, "Construction Technology 1: House Construction", Red Globe Press.
5. Wertheimer, L., 2007. "Building Technology", 2008. Kaplan Publishing.

Academic honesty and plagiarism: *(Below is just a sample)*

Copying of work (texts, simulation results etc.) from other students/groups or from other sources is not allowed. Brief quotations are allowed and then only if indicated as such. Existing texts should be reformulated with your own words used to explain what you have read. It is not acceptable to retype existing texts and just acknowledge the source as a reference. Be warned: students who submit copied work will obtain a mark of zero for the assignment and disciplinary steps may be taken by the Faculty. It is also unacceptable to do somebody else's work, to lend your work to them or to make your work available to them to copy.

Other additional information (Course policy, any specific instruction etc.):

NA

Disclaimer: