COURSE OUTLINE

Department & Faculty: **Dept. of Built Environment** **Centre Of Diploma Study, SPACE**	**Page : Page 1 of 9**
Course Code: Building Technology (DDPF1513) **Total Contact Hours : 56**	**Semester: 1** **Academic Session: 2012 / 2013**

Lecturer :

Room No. :

Telephone No. :

E-mel :

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.

LEARNING OUTCOMES

By the end of the course, students should be able to:

No.	Course Learning Outcome	Programme Learning Outcome(s) Addressed	Taxanomy and KL levels	Assessment Methods
1.	Describe and explain the theory and concept of building development environment in Malaysia step by step.	PO1	C3	Test Project Final Exam
2.	Draw and explain building plan and subsequently, calculate the building area based on floor plan	PO2	P3	Assignment
3.	Express ideas clearly and effectively as well as demonstrate understanding	PO4	P3 CS1- CS3	Presentation
4.	Relate some major views, the process, the elements and the theories of building environment development in Malaysia, under the Uniform Building Act 1984 in Real Estate profession	PO6	A3 LL1- LL2	Project

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STUDENT LEARNING TIME

Teaching and Learning Activities	Student Learning Time (hours)
A. Face-to-face Learning	
1. Lecture	28
2. Practical / Tutorial	14
3. Student Centered Learning	14
B. Self-Directed Learning	
1. Non face-to-face e.g. assignments	30
2. Revision	21.5
3. Assessment Preparation	7.5
C. Formal Assessment	
1. Continuous Assessment	2.5
2. Final Exam	2.5
Total	**120**

TEACHING METHODOLOGY
Lecture and Discussion, Co-operative Learning, Independent Study, Group Assignment

WEEKLY SCHEDULE

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

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Week 2 : **1.0 Introduction to Building Development Environments**
Assignment 1
(10%)

- 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

Assignment 1 to be submitted in week 6

Weeks 3 : **2.0 Substructure**
Quiz (5%)

- 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 : **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 5 : **2.0 Substructure**

- Introduction for substructure.

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- 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 6 : **2.0 Substructure**
Test 1 (10%)

- 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 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.

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- Introduction for substructure.

Week 8 : **Mid Term Break**

Week 9
Assignment 2
(10%) :

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 :

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.

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- Window
  - Definition, types and elements.
- Door
  - Definition, types and elements.
- Ceiling
  - Definition, types and elements.

Week 11 : **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.

Week 12 : **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

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- 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**
Test 2 (15%)

- 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**
Presentation (5%)

- Wall finishes
- Floor finishes
- Ceiling finishes
- Staircase finishes
- Roof finishes

Week 15 : **5.0 Building Finishes**

- Wall finishes
- Floor finishes
- Ceiling finishes
- Staircase finishes
- Roof finishes

Week 16 : **REVISION WEEK**

Week 17 - 19 : **FINAL EXAM**

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REFERENCES : **Courses Notes:**

Lester Wertheimer (2007). Building Technology 2008. Kaplan Publishing

Other References:

1. Andrew J. Charlett. (2006). Fundamental building technology. New York.
2. Lester Wertheimer (2007). Building Technology 2008. Kaplan Publishing.
3. Dr Janardan Jha and Prof S.K.Sinha (2004). "Building Technology". Delhi: Khanna Publisher.

GRADING

No.	Assessment Method	Number	% Each	Taxonomy	Overall %	Date of Implementation
1	Project	1	15	A3 LL1- LL2	15	Week 3
2	Presentation	1	5%	P1, P2, P3 CS1, CS2,CS3	5	Week 14
3	Test	2	10	C1, C2, C3	20	Week 6 & 13
4	Final Exam	1	60%	C1, C2, C3	60%	
	Overall Total				**100**	

Prepared by: **Name:** **Signature:** **Date:**	**Certified by: (Course Panel Head)** **Name:** **Signature:** **Date:**

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