



UNIVERSITI TEKNOLOGI MARA

RES117: BUILDING TECHNOLOGY I

Course Name (English)	BUILDING TECHNOLOGY I APPROVED
Course Code	RES117
MQF Credit	3
Course Description	This course introduces the basic principles of building construction.
Transferable Skills	This course introduces the basic principles of building construction skills.
Teaching Methodologies	Lectures, Blended Learning, Tutorial
CLO	<p>CLO1 Describe the basic concept of building construction and theories of basic technical drawing according to British Standard</p> <p>CLO2 Illustrate the selected building elements and building floor plan according to scale.</p> <p>CLO3 Report through verbal and writing on the construction of selected building elements</p>
Pre-Requisite Courses	No course recommendations
Topics	
<p>1. Introduction to technical drawings.</p> <p>1.1) Drawing instruments and material used in building construction.</p> <p>1.2) Scale drawing</p> <p>1.3) Presentation procedures of technical drawings</p> <p>1.4) Technical drawing software (CAD)</p> <p>1.5) Sketches and detailed working drawing</p> <p>1.6) Photography</p>	
<p>2. Introduction to technical drawings</p> <p>2.1) Drawing instruments and material used in building construction.</p> <p>2.2) Scale drawing</p> <p>2.3) Presentation procedures of technical drawings</p> <p>2.4) Technical drawing software (CAD)</p> <p>2.5) Sketches and detailed working drawing</p> <p>2.6) Photography</p>	
<p>3. Introduction to types of building construction (Concrete)</p> <p>3.1) Introduction to building structures</p> <p>3.2) Steel and concrete structural frames</p> <p>3.3) Residential – load bearing, timber, bricks</p> <p>3.4) Commercial and industrial – reinforced concrete, steel, pre-fabricated</p> <p>3.5) Contemporary construction methods</p>	
<p>4. Introduction to Types of Building Construction (Steel)</p> <p>4.1) Introduction to building structures</p> <p>4.2) Steel and concrete structural frames</p> <p>4.3) Residential – load bearing, timber, bricks</p> <p>4.4) Commercial and industrial – reinforced concrete, steel, pre-fabricated</p> <p>4.5) Contemporary construction methods</p>	
<p>5. Introduction to Types of Building Construction (Timber)</p> <p>5.1) Introduction to building structures</p> <p>5.2) Steel and concrete structural frames</p> <p>5.3) Residential – load bearing, timber, bricks</p> <p>5.4) Commercial and industrial – reinforced concrete, steel, pre-fabricated</p> <p>5.5) Contemporary construction methods</p>	

<p>6. Site Works and preliminary building process 6.1) Site preparation – soil investigation, ground water drainage 6.2) The organization of site layout 6.3) Excavation – application and mechanical equipments 6.4) Trench timbering and sequence of building process</p>
<p>7. Site Works and preliminary building process, ASSIGNMENT 7.1) Site preparation – soil investigation, ground water drainage 7.2) The organization of site layout 7.3) Excavation – application and mechanical equipments 7.4) Trench timbering and sequence of building process</p>
<p>8. Foundation, TEST 1 8.1) Types of foundation, selection of foundation</p>
<p>9. Basement 9.1) Underground construction – basement tanking 9.2) Problems with basement</p>
<p>10. Floors 10.1) Function of floor 10.2) Solid ground floor and suspended ground floor 10.3) Upper floors for multi-storey buildings 10.4) In-situ concrete floor 10.5) Pre cast concrete floor 10.6) Floor finishes</p>
<p>11. Floors 11.1) Function of floor 11.2) Solid ground floor and suspended ground floor 11.3) Upper floors for multi-storey buildings 11.4) In-situ concrete floor 11.5) Pre cast concrete floor 11.6) Floor finishes</p>
<p>12. TEST 2 12.1) n/a</p>
<p>13. PRESENTATION 13.1) n/a</p>
<p>14. REVISION 14.1) n/a</p>
<p>15. STUDY WEEK 15.1) n/a</p>
<p>16. EXAM 16.1) n/a</p>

Assessment Breakdown	%
Continuous Assessment	50.00%
Final Assessment	50.00%

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Assignment	Assignment	20%	CLO3
	Presentation	Presentation	10%	CLO3
	Test	Test 1	10%	CLO1
	Test	Test 2	10%	CLO2

Reading List	This Course does not have any book resources
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Article/Paper List	This Course does not have any article/paper resources
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Other References	<ul style="list-style-type: none"> • Book Chudley R. & Greeno R 2013, <i>Building Construction Handbook</i>, Butterworth-Heinemann • Book Charlett, A. & Maybery-Thomas, C 2013, <i>Fundamental Building Technology</i>, Routledge • Book Allen E. & Iano J 2011, <i>Fundamentals of Building Construction : Materials and Methods</i> , Wiley-Blackwell • Book Emmit, S. & Gorse C 2010, <i>Barry's Advanced Construction of Buildings</i> , Wiley-Blackwell • Book Ching, Frank 2008, <i>Building Construction Illustrated</i>, John Wiley & Sons
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