



UNIVERSITI TEKNOLOGI MARA

BCM664: CONSTRUCTION TECHNOLOGY VI

Course Name (English)	CONSTRUCTION TECHNOLOGY VI APPROVED
Course Code	BCM664
MQF Credit	3
Course Description	The general aim of the course is to provide sufficient knowledge and understanding of other works related to infrastructure construction. The course covers the element of roadwork, air field, bridges, tunnels, dams and marine structures with emphasis on the technology and installation of the element.
Transferable Skills	Ability to reduce the construction risk by selecting appropriate construction method and techniques available by taking various forcing factors and fulling factors into consideration.
Teaching Methodologies	Lectures, Blended Learning, Field Trip, Case Study, Tutorial, Presentation
CLO	<p>CLO1 Interpret the key issues associated in the design principles and civil engineering construction works namely tunnels, bridges, roadworks, runway, marine and dam construction.</p> <p>CLO2 Demonstrate good presentation in presenting finding and ideas on various system and element based on real case study.</p> <p>CLO3 Explain related construction method through appropriate technology devices or appliances.</p> <p>CLO4 Appraise suitable sustainable strategies in in order to reduce the negative impact on the construction industry.</p>
Pre-Requisite Courses	No course recommendations
Topics	
<p>1. BRIDGE CONSTRUCTION</p> <p>1.1) -Introduction</p> <p>1.2) -General consideration and planning</p> <p>1.3) -Design aspects of bridges</p> <p>1.4) Types of bridges</p> <p>1.5) -Construction process and technique</p>	
<p>2. TUNNEL CONSTRUCTION</p> <p>2.1) Introduction</p> <p>2.2) -General consideration and planning</p> <p>2.3) -Design aspects of tunnels</p> <p>2.4) -Types of Tunnels</p> <p>2.5) -Construction process and technique (e.g. TBM, Drill and Blast etc.)</p>	
<p>3. MARINE CONSTRUCTION</p> <p>3.1) -Introduction</p> <p>3.2) -General consideration & planning</p> <p>3.3) -Design aspects of marine structures</p> <p>3.4) -Types of marine structures</p> <p>3.5) -Method of construction</p>	
<p>4. ROADWORK CONSTRUCTION</p> <p>4.1) -Introduction</p> <p>4.2) -General consideration & planning</p> <p>4.3) -Design aspects of roadwork</p> <p>4.4) -Types of roadworks: flexible pavements, rigid pavements.</p> <p>4.5) -Materials and specification of roadwork</p> <p>4.6) -Construction process and technique.</p>	

5. LAND RECLAMATION

- 5.1) Introduction
- 5.2) General consideration & planning
- 5.3) Design aspects of land reclamation
- 5.4) Method of land reclamation

6. DAM CONSTRUCTION

- 6.1) -Introduction
- 6.2) -General consideration and planning
- 6.3) -Design aspects of dams
- 6.4) -Types of dams
- 6.5) -Construction process and techniques

7. AIRFIELD CONSTRUCTION

- 7.1) -Introduction
- 7.2) -General consideration and planning
- 7.3) -Design aspects Air Field
- 7.4) -Construction process and techniques

Assessment Breakdown	%
Continuous Assessment	40.00%
Final Assessment	60.00%

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Case Study	n/a	10%	CLO2
	Group Project	n/a	30%	CLO3

Reading List	Reference Book Resources
	<ul style="list-style-type: none"> • 1. Chudley, R & Greeno, R 2008, <i>Advanced Construction Technology</i>, 4th Edition Ed., Pearson Education Limited • 2. Chudley, R & Greeno, R, <i>Building Construction Handbook</i>, 7th Edition Ed., Butterworth Heinemann Publication • Foster J.S & Harington R 2007, <i>Structure and Fabric 1 & 2</i>, 7th Edition Ed., Longman • Smoltczyk U 2003, <i>Geotechnical Engineering Handbook Volume 1, 2 & 3</i>, Ernst & Sohn. • Illingworth J.R 2000, <i>Construction Methods and Planning</i>, E & FN Spon • Dempsey, P.S 2000, <i>Airport Planning and Development Handbook</i>, McGraw Hill New York.

Article/Paper List	This Course does not have any article/paper resources
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Other References	<ul style="list-style-type: none"> • n/a Nunnally S 1998, <i>Construction Method and Management</i>, Prentice-Hall
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