



UNIVERSITI TEKNOLOGI MARA

BCM463: SITE SURVEYING II

Course Name (English)	SITE SURVEYING II APPROVED
Course Code	BCM463
MQF Credit	3
Course Description	The general aim of the course is to provide sufficient knowledge and understanding of basic principles in site surveying pertaining to building construction. The course covers the element of introduction to theodolite, setting out, traverse surveying, tachometry, areas and volumes and GIS, with emphasis on the process and techniques of the works
Transferable Skills	Site survey skill
Teaching Methodologies	Lectures, Lab Work, Field Trip, Tutorial
CLO	CLO1 Deduce data of traverse surveying, tacheometry, area and volume measurement, and GIS required in preparing sites for construction CLO2 Demonstrate the use of surveying equipment for traverse surveying, tacheometry, and setting out in preparing sites for construction CLO3 Interpret data and produce traverse control plan, tacheometry and setting out plan for construction site preparation.
Pre-Requisite Courses	No course recommendations
Topics	
1. Theodolite 1.1) Introduction 1.2) Structure and its components 1.3) Handling of instruments 1.4) Setting up 1.5) Angle reading: horizontal 1.6) Angle reading: vertical 1.7) Trigonometric heighting 1.8) Instrument Errors and permanent adjustment.	
2. Setting Out 2.1) Introduction 2.2) Process of setting out 2.3) Establishment and maintenance of equipment 2.4) Marks and profiles 2.5) Setting out building works 2.6) Setting out road works 2.7) Setting out drains and pipelines	
3. Traverse Surveying 3.1) Introduction 3.2) Type of traverse 3.3) Procedures : station selection, distance measurement, Angle measurement 3.4) Booking procedures 3.5) Calculation 3.6) Plotting	
4. Tacheometry 4.1) Introduction 4.2) Types of tacheometry 4.3) Procedures : station selection, distribution of spot heights 4.4) Booking procedures 4.5) Calculation 4.6) Plotting	

5. Area and Volume Measurement 5.1) Introduction 5.2) Regular areas 5.3) Irregular areas 5.4) Volumes of regular solids 5.5) Volumes of irregular solids 5.6) Curved irregular solids
6. Introduction to GIS and mapping 6.1) n/a
7. Field Works 7.1) Setting out. 7.2) Traverse surveying 7.3) Tacheometry

Assessment Breakdown	%
Continuous Assessment	50.00%
Final Assessment	50.00%

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Lab Exercise	n/a	40%	CLO2
	Test	n/a	10%	CLO3

Reading List	<p>Reference Book Resources</p> <ul style="list-style-type: none"> • Charles D. Ghilani, Paul R. Wolf, 2007, <i>Elementary Surveying: An Introduction to Geomatics</i>, 12th Edition Ed., Pearson Prentice Hall • Kavanagh, B.F, 2003, <i>Surveying Principles and Applications</i>, 6th Edition Ed., Barnes & Noble • Muskett J,(2000, <i>Site Surveying</i>, 2nd Edition Ed., Blackwell Science • McCormac J.C, 1999, <i>Surveying</i>, John Wiley & Sons, Inc • Irvine W,, 1988, <i>Surveying for Construction</i>, 3rd Edition Ed., Mc Graw- Hill • Neal P, 1985, <i>Site Surveying Level 2 & 3</i>, Longman
Article/Paper List	This Course does not have any article/paper resources
Other References	This Course does not have any other resources