



UNIVERSITI TEKNOLOGI MARA

BCM423: SITE SURVEYING I

Course Name (English)	SITE SURVEYING I APPROVED
Course Code	BCM423
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 site surveying, linear surveying, compass surveying, levelling and contouring, with emphasis on the process and techniques of the works.
Transferable Skills	Land survey skill
Teaching Methodologies	Lectures, Lab Work, Demonstrations, Tutorial
CLO	CLO1 Appraise knowledge of mathematics, science, and engineering to understand the measurement techniques and equipment used in site surveying. CLO2 Demonstrate the use of surveying equipment for linear, contour and traverse surveying. CLO3 Interpret data by drawing and calculation.
Pre-Requisite Courses	No course recommendations
Topics	
1. Introduction 1.1) Background 1.2) Site surveys 1.3) Element of site surveys 1.4) Reconnaissance 1.5) Booking 1.6) Site survey procedures and good practice in construction projects 1.7) Plan scales	
2. Linear Measurement 2.1) Introduction to site control framework 2.2) Instrumentation e.g.: chain, steel tape, optical square, Electromagnetic 2.3) Distance Measurement (EDM) 2.4) Field operations and obstructions 2.5) Errors in measurement 2.6) Plotting of control point and details	
3. Leveling 3.1) Introduction 3.2) Instrumentation and setting up 3.3) Leveling procedure 3.4) Errors and accuracy 3.5) Levels grid 3.6) Longitudinal and cross sections 3.7) Computations, checking and reduction of level 3.8) Precise leveling 3.9) Tests and permanent adjustment	
4. Contouring 4.1) Introduction 4.2) Direct and indirect field methods 4.3) Graphical and mathematical methods 4.4) Use of contour plan in vertical sectioning and outlining of earthworks surfaces	

5. Field Works

5.1) Linear Surveying

5.2) Leveling and Contouring

Assessment Breakdown	%
Continuous Assessment	50.00%
Final Assessment	50.00%

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Lab Exercise	Report for field work activities	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 2000, <i>Elementary Surveying: An Introduction to Geomatics</i>, 12th Edition Ed., Pearson Prentice Hall. [ISBN: 978-013255434] • Kavanagh, B.F 2003, <i>Surveying Principles and Applications</i>, 6th Edition Ed., Barnes & Noble [ISBN: 978-013700940] • Muskett J, 2000, <i>Site Surveying</i>, 2nd Edition Ed., Blackwell Science [ISBN: 978-063203848] • 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 [ISBN: 978-007711114] • 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