

SURV H2501: Surveying and Setting Out II

Credits: 5 Credits: 6 Module Delivered In 1 programme(s) Teaching & Learning Lectures Demonstrations Project work Private study Blackboard Strategies: The aims of the module are: (1) to introduce students to modern day surveying equipment: (2) to teach students the basic principles relating to this equipment. Students must participate in class work, practical work & project work and must achieve a minimum of 50% in these elements of continuous assessment in order to have satisfied the module learning outcomes. Learning Outcomes On successful completion of this module the learner should be able to: L01 to understand & operate modern electronic distance measurement instruments (i.e. Leica, Pentax, Topcon, Trimble); L02 to understand & use these instruments to produce a detail survey of an area, a contour map of an area, longitudinal sections; L03 to understand & apply relevant computer software to obtain the output drawings in Learning Outcome (3). Pre-requisite learning Modules instruments to is recommended before enrolment in this module. No recommendations listed Incompatible Modules This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed. No incompatible modules listed Co-requisite Modules These is relearning (or a practical skill) that is mandatory before enrolment in this module is allowed.	Module Title:		Surveying and Setting Out II				
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	No requirements	listed					



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Module Content & Assessment

Indicative Content									
(1) Traversing (6 hours (a) Bearings and Coordi			rsing Field Work (c) Traversing Calcu	lations					
(2) Optical And Electromagnetic Distance Measurement (9 hours lectures, 20 hours application) (a) Total Station instrument characteristics (b) Applications of the instruments (c) Factors affecting accuracy									
(3) Curve Ranging (5 h (a) Circular curves and s			2 hours practicals) siples (b) Transition curves and setting	out principles	(c) Vert	ical curve	s and	l setting c	out principles
(4) Volume Computation			t ures) ur lines and spot levels (b) Mass haul	diagrams	.,				
	nstructio	n Woi	rk (3 hours lectures, 3 hours practic	0					
(6) Computer Applicati	ons (3 h	ours p		ackage AutoC	AD (d) S	oftware F	acka	ge AutoC	AD Civil 3D
	(2 hours	s lectu	res, 2 hours practicals)	-	. /			-	
Assessment Breakdov	vn						%)	
Continuous Assessment					10.00%				
Practical 30.00%						0.00%	00%		
End of Module Formal Examination 60						60.00%			
Continuous Assessme	ent								
Assessment Type	Assess	ment L	Description		Outcome % of Assess addressed total Date			Assessment Date	
Examination	1 on 1 [Demor	nstration of Instrument Use Capability		1,2,3,4	1,2,3,4 10		10.00	n/a
No Project									
Practical									
Assessment Type					Outcome addressed			% of total	Assessment Date
Practical/Skills Evaluation			3 - 5 external surveying practicals 1,2,3,4			4		30.00	n/a
End of Module Formal	Examina	ation							
Assessment Type Asse		Asses	ssment Description Outcome addressed			% of total			Date
Formal Exam		No De	escription 1,2,3 60.00 End-of-Semester				ster		

SETU Carlow Campus reserves the right to alter the nature and timings of assessment



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Module Workload

Workload: Full Time		
Workload Type	Frequency	Average Weekly Learner Workload
Lecture	30 Weeks per Stage	1.00
Practicals	30 Weeks per Stage	0.83
Laboratory	30 Weeks per Stage	0.17
Estimated Learner Hours	30 Weeks per Stage	3.00
	Total Hours	150.00

Module Delivered In						
Programme Code	Programme	Semester	Delivery			
CW_CMHCE_B	Bachelor of Engineering (Honours) in Civil Engineering - Ab Initio	3	Mandatory			