

<b>Module Title:</b>	Surveying and Setting Out I
<b>Language of Instruction:</b>	English
<b>Credits:</b>	5
<b>NFQ Level:</b>	6
<b>Module Delivered In</b>	<a href="#">1 programme(s)</a>
<b>Teaching &amp; Learning Strategies:</b>	Lectures Practicals Private study Blackboard
<b>Module Aim:</b>	The aims of the module are: (1) to develop a knowledge of basic surveying techniques; (2) to train the student in field levelling procedures; (3) to introduce the student to surveying software packages. 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 listed above.
<b>Learning Outcomes</b>	
<i>On successful completion of this module the learner should be able to:</i>	
LO1	to understand & use the engineering level competently in the area of construction & for collection of data for preparation of contour maps & longitudinal sections;
LO2	to understand & apply surveying techniques for collecting surveying data in basic linear surveying of small sites;
LO3	to understand & use manual drafting and surveying software packages to produce contour maps and longitudinal sections
<b>Pre-requisite learning</b>	
<b>Module Recommendations</b>	
<i>This is prior learning (or a practical skill) that is recommended before enrolment in this module.</i>	
No recommendations listed	
<b>Incompatible Modules</b>	
<i>These are modules which have learning outcomes that are too similar to the learning outcomes of this module.</i>	
No incompatible modules listed	
<b>Co-requisite Modules</b>	
No Co-requisite modules listed	
<b>Requirements</b>	
<i>This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed.</i>	
No requirements listed	

## Module Content & Assessment

### Indicative Content

**(1) Linear Surveying (8 hour lectures, 5 hour practicals)**

(a) Field Procedures (b) Field Obstacles (c) Booking Procedures (d) Ordnance Survey Mapping

**(2) Area Computation (6 hours lectures)**

(a) By triangulation (b) Simpsons Rule for Area Evaluation (c) Trapezoidal Rule for area evaluation

**(3) Engineering Level (14 hours lectures, 20 hours practical)**

(a) Surveying For Height (b) Ordnance datum and Bench Marks (c) Optical Levels (d) Field Procedures (e) Permanent Adjustments (f) Longitudinal Sections (g) Contour Maps (h) Use of level for Building work, drainage and sewage

**(4) Computer Application (2 hour lecture, 5 hours application)**

(a) Introduction to software packages for production of Contour maps, sections and digitised maps

### Assessment Breakdown

	%
Continuous Assessment	10.00%
Practical	30.00%
End of Module Formal Examination	60.00%

### Continuous Assessment

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Examination	1 on 1 Demonstration of Instrument Use Capability	1,2,3	10.00	n/a

No Project

### Practical

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Practical/Skills Evaluation	3 - 5 Field Survey Practicals	1,2,3	30.00	n/a

### End of Module Formal Examination

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Formal Exam	Final Examination	1,2	60.00	End-of-Semester

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

**Module Workload**

<b>Workload: Full Time</b>		
<i>Workload Type</i>	<i>Frequency</i>	<i>Average Weekly Learner Workload</i>
Lecture	30 Weeks per Stage	1.00
Practicals	30 Weeks per Stage	1.00
Estimated Learner Hours	30 Weeks per Stage	3.00
Total Hours		150.00

**Module Delivered In**

Programme Code	Programme	Semester	Delivery
CW_CMHCE_B	<a href="#">Bachelor of Engineering (Honours) in Civil Engineering - Ab Initio</a>	1	Mandatory