

Full Title:	Surveying 1
Language of Instruction:	English
Module Code:	CENG E7004
Credits:	10
Valid From:	Semester 1 - 2014/15 (September 2014)
Module Delivered in	1 programme(s)
Module Description:	Introducing the fundamentals of surveying for civil engineers with a particular emphasis on practical application of surveying techniques.
Learning Outcomes:	
<i>On successful completion of this module the learner should be able to</i>	
<ol style="list-style-type: none"> 1. Interpret maps and apply measurement, mensuration and scale calculations 2. Plan surveys and collect data using tape, level and theodolite as an individual and as part of a group 3. Analyse survey data and assess the sources and effects of errors 4. Communicate survey data by producing properly scaled maps, contour drawings and cross sections 	

Module Content & Assessment

Indicative Content
Understanding maps and Plans Understanding and using maps and plans
Scale Using scale for plotting and measurement
Linear Surveying Surveying sites using tapes
Plotting Surveys Accurately plotting surveys using appropriate scales and symbols
Levelling Using instruments to measure, record and calculate elevations
Errors in surveying Predicting, assessing and mitigating errors in surveying
Contouring Producing contour drawings and using contours for volume and gradient calculations.
Cross Sections producing and using cross sections for volume calculation
Theodolite Setting up, operating and checking theodolites
Coordinates Calculating and using coordinates

Assessment Breakdown	%
Course Work	50.00%
End of Module Formal Examination	50.00%

Full Time

Course Work							
<i>Assessment Type</i>	<i>Assessment Description</i>	<i>Outcome addressed</i>	<i>% of total</i>	<i>Marks Out Of</i>	<i>Pass Marks</i>	<i>Assessment Date</i>	<i>Duration</i>
Practical/Skills Evaluation	10 to 20 weekly practicals will reinforce the theory covered in lectures and allow students to develop practical surveying skills. Practical will include using chains and tapes, levels, theodolites, total stations, producing maps and generating contours.	1,2,3,4	50.00	0	0	n/a	0

No Project

No Practical

End of Module Formal Examination							
<i>Assessment Type</i>	<i>Assessment Description</i>	<i>Outcome addressed</i>	<i>% of total</i>	<i>Marks Out Of</i>	<i>Pass Marks</i>	<i>Assessment Date</i>	<i>Duration</i>
Formal Exam	End-of-Semester Final Examination	1,2,3,4	50.00	0	0	End-of-Semester	0

Reassessment Requirement**A repeat examination**

Reassessment of this module will consist of a repeat examination. It is possible that there will also be a requirement to be reassessed in a coursework element.

Reassessment Description

The form of reassessment has been more clearly articulated in all relevant module descriptors. Students shall be offered appropriate alternative assessments in place of recoverable elements of coursework. Elements of coursework which the programme board have agreed are non-recoverable are clearly communicated to students.

DKIT reserves the right to alter the nature and timings of assessment

Module Workload & Resources

Workload: Full Time

Workload Type	Workload Description	Hours	Frequency	Average Weekly Learner Workload
Lecture	Introduce fundamental theories and concepts of surveying	2.00	Every Week	2.00
Practical	Application of surveying theories and use of appropriate survey equipment demonstrated by lecturer	2.00	Every Week	2.00
Independent Study	Student self guided study to reinforce the theories and concepts introduced in lectures. Includes processing data collected during practical sessions	5.00	Every Week	5.00
Total Weekly Learner Workload				9.00
Total Weekly Contact Hours				4.00

This course has no Part Time workload.

Resources

Recommended Book Resources

Irvine and MacLennan 2006, *Surveying for Construction*, Fifth Ed.

Uren and Price, *Surveying for Engineers*

W Schofield and M Breach 2007, *Engineering Surveying*

This module does not have any article/paper resources

This module does not have any other resources

Module Delivered in

Programme Code	Programme	Semester	Delivery
DK_ECIVL_7	Bachelor of Engineering in Civil Engineering	1	Mandatory