Module specification

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Module code	AURH416
Module title	Site Surveying
Level	4
Credit value	20
Faculty	FAST
Module Leader	Louise Duff
HECoS Code	100548
Cost Code	GABE

Programmes in which module to be offered

Programme title	Is the module core or option for this programme
HNC Civil Engineering	Core

Pre-requisites

N/A

Breakdown of module hours

Learning and teaching hours	16 hrs
Placement tutor support	0 hrs
Supervised learning e.g. practical classes, workshops	32 hrs
Project supervision (level 6 projects and dissertation modules only)	0 hrs
Total active learning and teaching hours	**48** hrs
Placement / work based learning	0 hrs
Guided independent study	152 hrs
Module duration (total hours)	200 hrs

For office use only	
Initial approval date	13/04/21
With effect from date	01/09/21
Date and details of revision	29/06/2021 Administrative change to module code
Version number	1

Module aims

This module is designed to develop skills in using modern surveying equipment to carry out a range of typical site surveying procedures in the construction and built environment sector. The module provides an opportunity to develop an understanding of the principles of site surveying, as well as providing an understanding of the skills required to perform surveying calculations and control.

Module Learning Outcomes - at the end of this module, students will be able to:

1	Explain the principles of site surveying - explain the use of electronic surveying instruments appropriate for differing surveying tasks
2	Provide traverse and other control calculations required when using surveying instruments.
3	Undertake a series of practical surveying tasks that require horizontal, vertical and angular measurements and checking.

Assessment

Indicative Assessment Tasks:
Assessment 1 Written assignment to detail the principles of site surveying and equipment used (1,000 words~)

Assessment 2 The assessment will relate to a practical surveying exercise to be undertaken as a group exercise, which will require undertaking a closed traverse topographical survey, using a variety of instruments.

The practical assessment will provide evidence of individual calculations demonstrating correction methods, accuracy, errors and appropriate data management.

Where group tasks are detailed, students will be provided with an individual marking criterion.

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)
1	1	Written Assignment	25
2	2 & 3	Practical	75

Derogations

N/A

Learning and Teaching Strategies

A series of key lectures will provide the students with the necessary underpinning knowledge and appreciation of the theory of traverse surveys, corrections and errors. Practical instruction sessions in the use of relevant equipment will encourage application of theory to practice and key lectures will impart relevant surveying theory and techniques. Learners will in general work individually but group work will be required for practical surveying work.

IT workshops will be facilitated to explore computer software such as PIX4D, AutoCAD, Revit, etc.

Indicative Syllabus Outline

The purpose of topographical surveying in the provision of buildings and civil engineering infrastructure, and the technologies that are available to the industry in carrying out surveying activities, including ground-based and aerial optical and digital instrumentation.

The purpose of control points and co-ordination with local, national and grid control data, including global positioning systems.

Processes in undertaking a closed traverse, including checks towards accuracy and the establishment of corrected linear and angular measurements.

Practical instruction in the use of optical and digital surveying equipment and associated computer software in the transfer, use and representation of survey data.

Indicative Bibliography:

Please note the essential reads and other indicative reading are subject to annual review and update.

Essential Reads

Irvine, W. and MaClennan, F. (2005) *Surveying for Construction*. 5th Ed. London: McGraw-Hill.
Uren, J. and Price, W. (2010) *Surveying for Engineers.* 5th Ed. Basingstoke: Palgrave Macmillan.

Other indicative reading

Schofield, W. and Breach, M. (2007) *Engineering Surveying*. 6th Ed. Oxford: Elsevier.

Other sources:
www.ciat.org.uk
www.ciob.org.uk
www.ice.org.uk
www.riba.org.uk
www.cih.org
www.ihsti.com
www.tsa-uk.org.uk

Employability skills – the Glyndŵr Graduate

Each module and programme is designed to cover core Glyndŵr Graduate Attributes with the aim that each Graduate will leave Glyndŵr having achieved key employability skills as part of their study. The following attributes will be covered within this module either through the content or as part of the assessment. The programme is designed to cover all attributes and each module may cover different areas.

Core Attributes
Engaged
Enterprising
Ethical

Key Attitudes
Commitment
Resilience
Confidence
Adaptability

Practical Skillsets
Digital Fluency
Organisation
Leadership and Team working
Critical Thinking
Communication