Site Surveying Procedures

Module Information

2022.01, Approved

Summary Information

Module Code	4404CIVH
Formal Module Title	Site Surveying Procedures
Owning School	Civil Engineering and Built Environment
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 4
Grading Schema	40

Teaching Responsibility

LJMU Schools involved in Delivery
Civil Engineering and Built Environment

Learning Methods

Learning Method Type	Hours
Lecture	24
Practical	24
Workshop	24

Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
SEP-CTY	CTY	September	28 Weeks

Aims and Outcomes

Aims	To introduce basic techniques for land surveying and setting out: methods of obtaining field measurements for the purpose of producing site drawings and hence the calculation of land areas and earthwork volumes, setting out points using line-of sight.To develop an understanding of the use and application of Computer Aided Design in the Built Environment and the development of 2-dimensional drafting techniques and conventions.

After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Carry out field exercises to illustrate methods of levelling, angular measurement: booking, calculation and application including setting out using information extracted from a drawing, map or other sources.
MLO2	2	Use measured values to compute and draw contours, longitudinal and cross- sections, and to evaluate volumes of earthworks.
MLO3	3	Produce completed booking sheets showing all calculations in the areas of levelling and angular measurement.
MLO4	4	Identify and calculate data necessary for setting out of civil engineering works.
MLO5	5	Produce 2D drawings using industry standard CAD software application.

Module Content

Outline Syllabus	Vertical control: Set up, use and adjustment of the level. Ordnance Bench Marks. Levelling techniques. Accuracy checks.Horizontal control: Set up, use and adjustment of Total Station. Traverse surveys and their adjustment.Application of digital instruments and the use of computer packages in surveying. Setting Out: Procedure for co-ordinated setting out, procedures and practices for setting out ground works, road construction and drainage works.Applications: Computation and drawing of contours, longitudinal sections and cross-sections. Determination of areas of land and volumes of earthworks.Introduction to CAD and applications of the software in practice. Creating, opening and saving CAD files using the latest version of AutoCAD. Setting up system preferences, drawing scales, drawing sheet size, borders, title block. Use of view, zoom and pan commands, layers, line types, text styles, and dimension styles.Drawing and modifying 2D objects using standard construction industry conventions. Editing, enhancing, annotating and setting up drawings for plotting.Production of site plans, floor plans, elevations and detail drawings. Use of format, draw, tools and modify commands. Use of layers, line type and weight, lock, freeze and thaw. Creating and editing text and dimensions.
Module Overview	
Additional Information	An introduction to basic land surveying techniques. The field measurements required to produce a contoured site plan to a chosen scale, the use of field information to compute land areas and earthworks volumes, and setting out simple features to full scale on site in both line and level.Students require access to personal computers with computer aided drawing software.

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Portfolio	2500 WORD FIELD PORTFOLIO	60	0	MLO1, MLO2, MLO3, MLO4, MLO5

Centralised Exam	Examination	40	1.5	MLO2, MLO3, MLO4, MLO5

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Ziad Abdeldayem	Yes	N/A

Partner Module Team

Contact Name	Applies to all offerings	Offerings